# Service Manual

Dolby NR-Equipped Stereo Cassette Deck RS-B655

# DOLBY B.C NR HX PRO



Stereo cassette deck

Color

(K)...Black Type

#### Area

Country Code	Area	Color
(E, E5)	Continental Europe.	
(EB)	Great Britain.	(K)
(EG)	F.R. Germany and Italy	

\* HX Pro headroom extension originated by Bang
 Olufsen and manufactured under license from Dolby
 Laboratories Licensing Corporation.
 "DOLBY", the double-D symbol, and "HX PRO" are
 trademarks of Dolby Laboratories Licensing
 Corporation.

**MECHANISM SERIES: AR350** 

## **SPECIFICATIONS**

# ■ CASSETTE DECK SECTION

Deck system

4-track, 2-channel Track system Heads Rec/play Permalloy head Double-gap ferrite head Erasing Motors Quartz direct drive DC motor Capstan DC motor Reel table drive AC bias Recording system 80 kHz Bias frequency Erasing system AC erase Tape speed 4.8 cm/sec. (17/8 ips) Frequency response

 NORMAL
 20 Hz~18 kHz

 20 Hz~16 kHz (DIN)

 CrO2
 20 Hz~18 kHz

20 Hz~17 kHz (DIN)

METAL

20 Hz~19 kHz

20 Hz~18 kHz (DIN)

S/N (signal level=max recording level, CrO<sub>2</sub> type tape)

 Dolby C NR on
 74 dB (CCIR)

 Dolby B NR on
 66 dB (CCIR)

 Dolby NR off
 56 dB (A weighted)

Wow and flutter 0.05% (WRMS)  $\pm 0.15\%$  (DIN)

Fast forward and rewind times

Approx. 90 seconds with C-60 cassette tape

Input sensitivity and impedance

 $\begin{array}{ll} \text{MIC} & 0.25 \text{ mV}/400 \Omega {\sim} 10 \text{ k} \Omega \\ \text{LINE} & 60 \text{ mV}/47 \text{ k} \Omega \end{array}$ 

Output voltage and impedance LINE

 $\begin{array}{lll} \textbf{LINE} & 400~\text{mV}/800\Omega \\ \textbf{HEADPHONES} & 125~\text{mV}/8\Omega \\ & (8\Omega{\sim}600\Omega) \end{array}$ 

**■** GENERAL

Power consumption 21 W

Power supply

For Great Britain AC 240V, 50/60 Hz For others AC 220V, 50/60 Hz Dimensions (W × H × D)  $430 \times 135 \times 290 \text{ mm}$   $(16^{15}/_{16}^{"} \times 5^{1}/_{8}^{"} \times 11^{13}/_{32}^{"})$ 

Weight 4.9kg (10.8lb.)

Note:

Specifications are subject to change without notice. Weight and dimensions are approximate.

# **Technics**

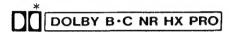
Matsushita Electric Industrial Co., Ltd.

Central P.O. Box 288, Osaka 530-91, Japan

# Service Manual

Dolby NR-Equipped Stereo Cassette Deck

RS-B655





Color

(K)...Black Type

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**MECHANISM SERIES: AR350** 

## SPECIFICATIONS

## **■ CASSETTE DECK SECTION**

Deck system
Track system
Heads
Rec/play
Erasing
Double-gap ferrite head
Motors

Stereo cassette deck
4-track, 2-channel
Permalloy head
Double-gap ferrite head

Capstan Quartz direct drive DC motor
Reel table drive DC motor
Recording system AC bias
Bias frequency 80 kHz
Erasing system AC erase
Tape speed 4.8 cm/sec. (1% ips)

 Frequency response

 NORMAL
 20 Hz~18 kHz

 20 Hz~16 kHz (DIN)
 20 Hz~18 kHz

 CrO₂
 20 Hz~18 kHz

20 Hz~17 kHz (DIN)

METAL 20 Hz~19 kHz
20 Hz~18 kHz (DIN)

S/N (signal level=max recording level, CrO<sub>2</sub> type tape)

 Dolby C NR on
 74 dB (CCIR)

 Dolby B NR on
 66 dB (CCIR)

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Fast forward and rewind times

Approx. 90 seconds with C-60 cassette tape

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 MIC
 0.25 mV/400Ω~10 kΩ

 LINE
 60 mV/47 kΩ

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 $\begin{array}{lll} \textbf{LINE} & 400 \text{ mV/800}\Omega \\ \textbf{HEADPHONES} & 125 \text{ mV/8}\Omega \\ & (8\Omega{\sim}600\Omega) \end{array}$ 

GENERAL

Power consumption

21 W

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 For Great Britain
 AC 240V, 50/60 Hz

 For others
 AC 220V, 50/60 Hz

 Dimensions (W × H × D)
 430 × 135 × 290 mm

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Specifications are subject to change without notice. Weight and dimensions are approximate.

# **Technics**

Matsushita Electric Industrial Co., Ltd.

Central P.O. Box 288, Osaka 530-91, Japan

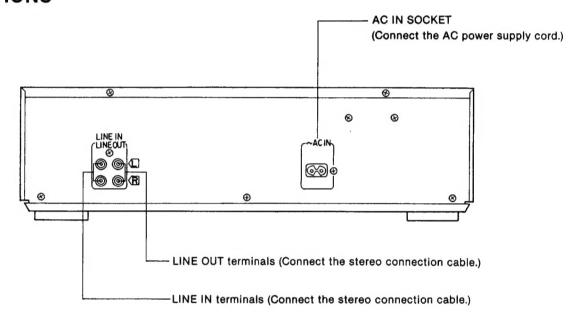
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* TECHNICAL INFORMATION

\*\* This technical information is located on pp 45-51 of the RS-B555 Service Manual (Order No. AD8907231C5). Therefore, refer to that Service Manual.

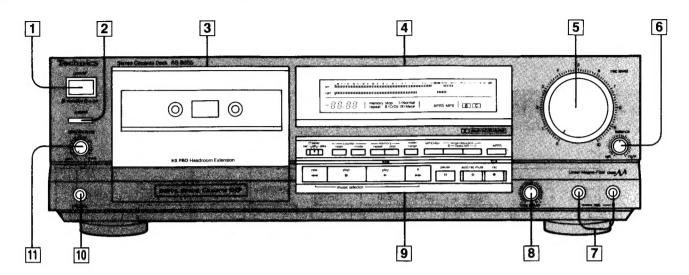
# **CONNECTIONS**



# **ACCESSORIES**

Stereo connection cables 2	AC power supply cord 1
[SJP2249-3]	[SFDAC05E03: (E, E5, EG)]
	LSJA193-1: (EB)

# ■ FRONT PANEL CONTROLS AND FUNCTIONS



# 1 Power "standby () /on" switch (power "standby () /on")

This switch switches ON and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the "standby" position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

# 2 Eject button (≜eject)

This button can be used to open the cassette holder.

- 3 Cassette holder
- 4 Display section
- 5 Recording-level control (rec level)

This control can be used to regulate the recording level and the peak level.

# 6 Recording-balance control (balance)

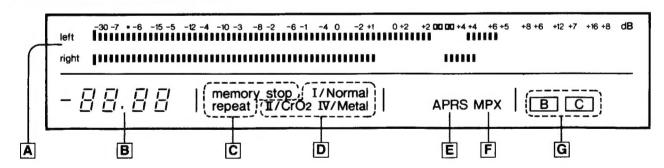
Use this control to balance the left and right sound levels during recording.

- 7 Microphone jacks (mic)
- 8 Bias-adjustment control (bias adjust)

The frequency response for each tape type can be equalized by using this control.

- 9 Operation section
- 10 Headphones jack (phones)
- [11] Headphones volume control (phones level)

# ( Division American



# A Input level meter (peak level)

During playback, this meter indicates the level of the recorded sound.

During recording, it indicates the level being recorded, adjusted by the recording-level control.

# B Tape/Linear counter

Indicates the amount of tape movement or elapsed time.

# Memory-mode indicators (memory stop/repeat)

Each indicator illuminates to show which of the memory mode was set by the memory-mode buttons.

### D Tape-select indicators

The type of tape being used will be automatically detected and the indicator will illuminate.

## E APRS indicator (APRS)

Illuminates to indicate that the "APRS" is set to "on" in the recording stand-by mode.

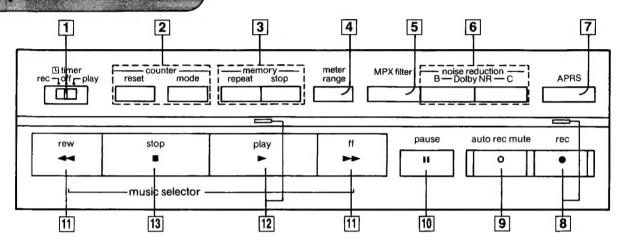
#### F Multiplex filter indicator (MPX)

Illuminates to indicate that the multiplex filter is set to "on".

# G Dolby noise-reduction indicators (B, C)

Each indicator illuminates to show the type of Dolby noisereduction system selected by pressing one of the Dolby noise-reduction buttons.

# Operation section



## 1 Timer switch (四 timer)

This switch is used to automatically begin a tape recording or tape playback at a certain time, selected by a timer (not included).

#### 2 Counter buttons (counter reset/mode)

mode: This button can be used to select the tape/linear

counter indication.

reset: This button can be used to reset the tape/linear

counter indication to "0000".

#### 3 Memory-mode buttons (memory repeat/stop)

stop: This button can be used to rewind the tape to the

preset "0000" point when the rewind (◄◄) button

is pressed.

repeat: This button can be used to set this unit to the "A-B

repeat" mode.

#### 4 Meter-range selector (meter range)

This selector can be used to select the meter-range display of the input level meter.

#### 5 Multiplex filter switch (MPX filter)

This switch can be used during the recording of an FM stereo broadcast that employs Dolby noise reduction so as to prevent misoperation of the Dolby noise reduction.

## [6] Dolby noise-reduction buttons (noise reduction)

These buttons are used to reduce the hissing noise heard from the tape. This unit is provided with both the B-type and C-type noise-reduction systems.

# 7 APRS button (APRS)

This button can be used to hold the peak level while monitoring the input sound.

The "APRS" can only be used in the recording stand-by mode

# 8 Record button and indicator (rec/•)

This button can be used to change the tape deck to the recording stand-by mode.

This indicator illuminates to indicate that this tape deck is in the recording stand-by mode, or is recording.

# 9 Automatic-record-muting button (auto rec mute/(-))

This button can be used to make a silent interval on the tape being recorded on tape deck.

#### 10 Pause button (pause/II)

This button can be used to temporarily stop the tape playback or recording of tape deck.

# [1] Rewind/fast-forward/search buttons (rew/◀◀/ff/▶▶)

These buttons can be used to fast forward or rewind the tape, or to easily search for the tune's beginning of the tape quickly.

#### 12 Playback button and indicator (play/▶)

This button can be used to start the playback or recording of the cassette.

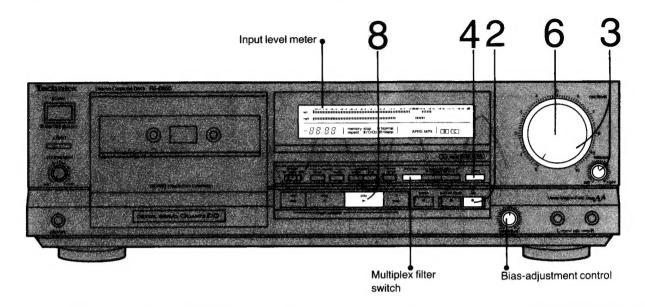
(The tape will then begin moving in the left-to-right direction.)

When this indicator illuminates steadily, it indicates that this tape deck is in the playback mode or the recording mode. When it flashes continually, this is an indication that this tape deck is in the pause mode or the recording stand-by mode.

# 13 Stop button (stop/■)

This button can be used to stop tape movement.

# ■ RECORDING WITH HIGH TONE QUALITY



# **APRS function**

Because the dynamic range of cassette tape is narrower than the dynamic range of a digital source, the recording will be too noisy if the recording level setting is too low, and, conversely, the recorded sound will be distorted if the setting is too high.

It was for this reason that it has always been recommended that the signals to be recorded be first (before recording) input to the cassette deck and the recording level then be set while watching the level meter, but, for former conventional level meter equipped with the peak-hold function, it was necessary to re-adjust and input the signals again if the level setting was too high or too low.

This unit, however, is equipped with the APRS: Advanced Precise Recording-level System, which holds and displays the maximum peak of the input signal level, so that once the peak level of the source is held, there is no necessity to re-input the source signals, and the optimum recording level can be set.

- The APRS function can be used only during the recordingstandby mode.
- Prepare for recording as described in steps 1 to 6 of the "Recording" section.
- 7 rec

## Press the record button.

(The recording indicator will illuminate and the playback indicator will flash continuously; the unit will be in the recording stand-by mode.)

3 rec level / balance
Set the recording-level control and the recording-balance control to the suitable position for the sound source.

APRS

Press the APRS button.

(The APRS indicator will illuminate.)

# 5 Play the sound source to be recorded, from beginning to end.

[The peak level (the highest level of the input signal) of the sound source will be displayed and held on the input-level meter.]

Input level meter



#### Note:

The range within which the peak level can be held is -8 dB to +16 dB. Note that the APRS indicator will flash continuously if the peak level of the sound source is input at a level that exceeds the maximum recording level (+16 dB).

If that happens, press the APRS button to cancel the APRS function, and then reset the recording level and set the APRS once again.

Also note that the peak level cannot be held to less than -8 dB.

rec level

# Using the recording-level control, adjust the peak level to the desired setting.

The peak level will move to the right when the recordinglevel control is turned to the right, and will move to the left when the recording-level control is turned to the left.

- The recording-balance control cannot be used to adjust the peak level.
- 7 Begin playing the sound source from the beginning once again.
- **Q** play

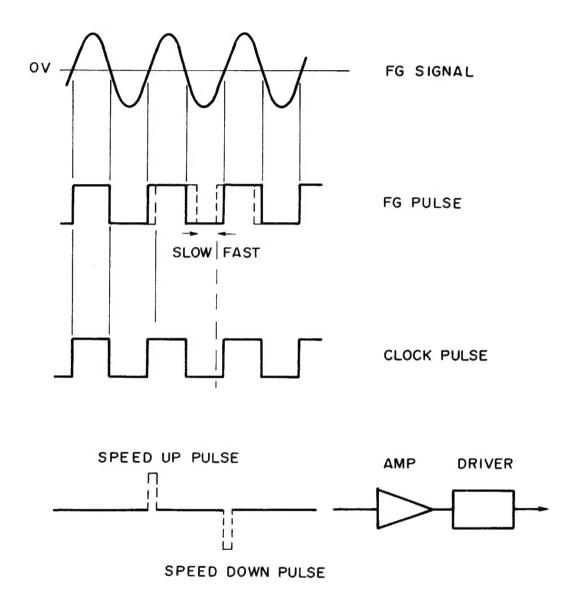
#### Press the playback button.

(The playback indicator will illuminate steadily, and the recording will begin.)

The APRS indicator will switch OFF, and the indication of the input-level meter will return to the ordinary peak-hold mode.

# ■ OUTLINE OF THE DIRECT DRIVE MOTOR SYSTEM

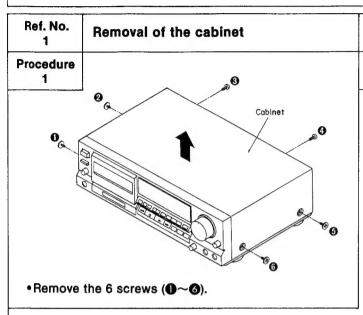
The capstan motor is actuated by the DD motor digital servo system. The FG pulse is generated after the detection of the zero crosspoint, and the reference signal generated from the quartz oscillator is compared with this FG pulse. From this comparison, the accelerated and reduced speed pulses are generated, causing the driving coil to function.



# ■ DISASSEMBLY INSTRUCTIONS

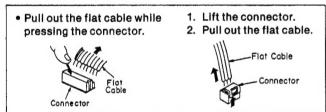
#### "ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.



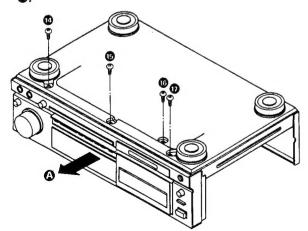
- 3. Remove the 6 screws ( $3\sim$ ).
- 4. Remove the 1 connector (CP2).
- 5. Remove the 4 flat cables (CN3, CN4, CN6, CN201).
- 6. Remove the main P.C.B. in the direction of the arrow.

#### How to remove the flat cable

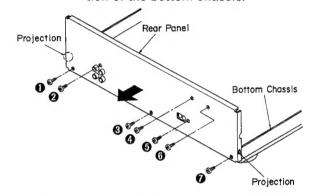


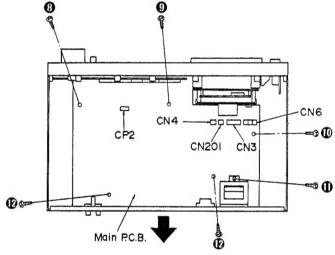
## How to check the main P.C.B.

- •When checking the soldered surfaces of main P.C.B. and replacing the parts, do as show.
- 1. Remove the 9 screws (1, 3, 2~18) in above figure.
- 2. Remove the 4 screws (10~10).
- 3. Remove the front panel in the direction of the arrow

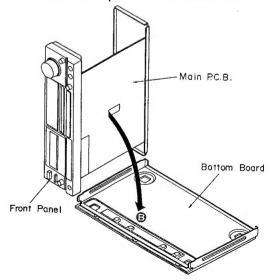


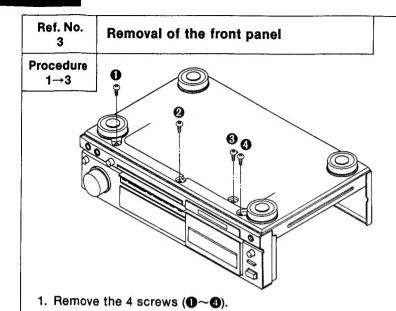
- Ref. No. 2 Removal of the main P.C.B.
- Procedure
  1. Remove the 7 screws (1 ~ 2).
  2. Remove the rear panel from the
  - 2. Remove the rear panel from the projection of the bottom chassis.



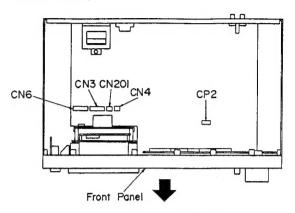


- 4. Remove the bottom board in the direction of the arrow (a).
- 5. Reinstall the front panel to the main P.C.B.





- 2. Remove the 1 connector (CP2).
- 3. Remove the 4 flat cables (CN3, CN4, CN6, CN201).

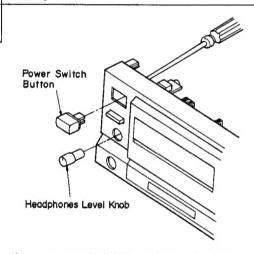


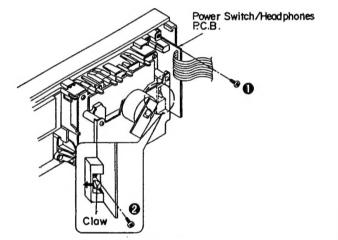
4. Remove the front panel in the direction of the arrow.

Ref. No.

Removal of the power switch/ headphones P.C.B.

Procedure 1→3→4





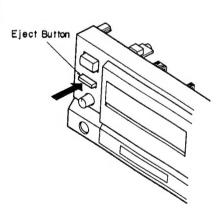
- 1. Remove the power switch button by pushing it from behind the front panel.
- 2. Pull out the headphones level knob.

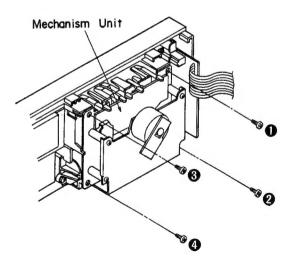
- 3. Remove the 2 screws (1), 2).
- 4. Release the 1 claw.

Ref. No. 5

Removal of the mechanism unit

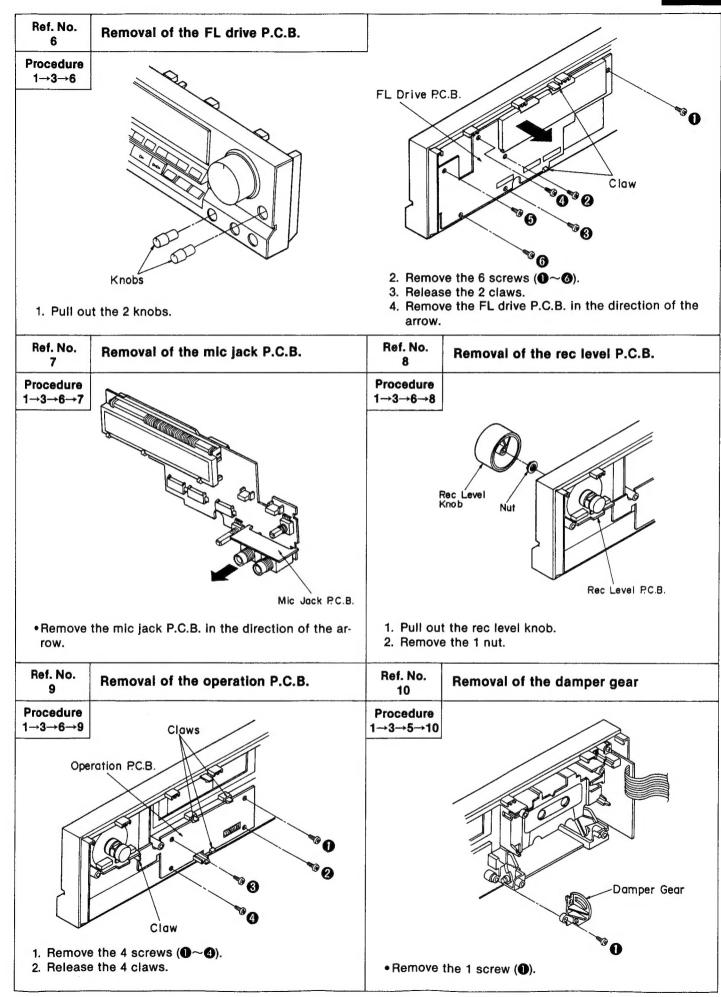
Procedure 1→3→5



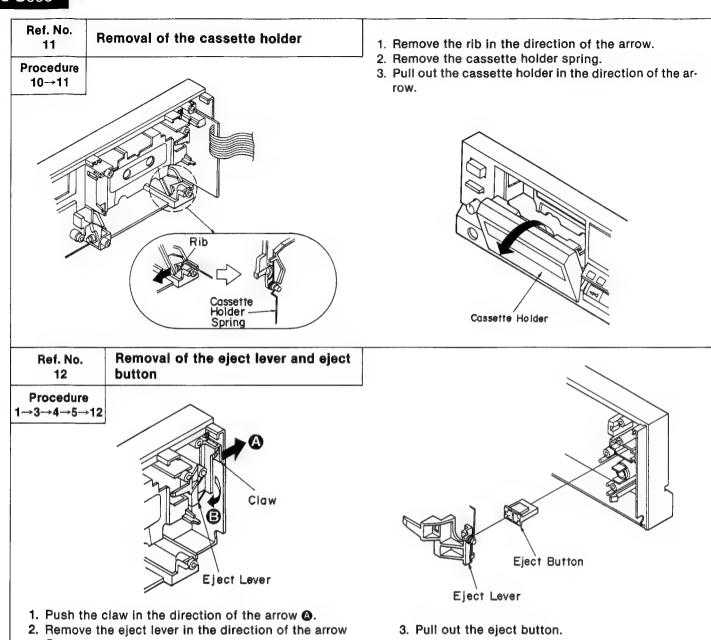


1. Push the eject button.

2. Remove the 4 screws (0~4).



# RS-B655



# ■ MEASUREMENT AND ADJUSTMENT METHODES

## **Measurement Condition**

- Rec. level control; Maximum
- Timer switch; Off
- MPX filter switch: off
- Bias-adjustment VR: Center

#### Measuring instrument

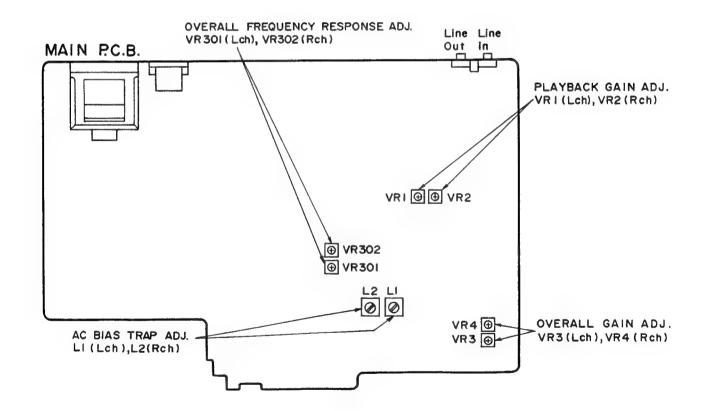
- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

#### Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315 Hz, 12.5 kHz, 10 kHz, 8 kHz, 4 kHz, 1 kHz, 250 Hz, 125 Hz, 63 Hz, -20 dB); QZZCFM

- . Dolby NR switch; Off
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)
- Playback gain adjustment (315 Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment Normal reference blank tape; QZZCRA CrO<sub>2</sub> reference blank tape; QZZCRX Metal reference blank tape; QZZCRZ

# Adjustment Points



#### **HEAD AZIMUTH ADJUSTMENT**

1.Playback the azimuth adjusment portion (8 kHz, -20 dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-CH and R-CH are maximized and the lissajous waveform, as illustrated, approaches 0 degrees.

Note: If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2.Perform the same adjustment in the play mode.

3. After the adjustment, apply screwlock to the azimuth adjusting screw.

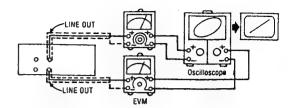


Fig. 1



Fig. 2

## PLAYBACK GAIN ADJUSTMENT

 Playback the gain adjusted portion (315 Hz, 0 dB) of the test tape (QZZCFM).

 Adjust VR1 (L-CH) and VR2 (R-CH) so that the output is within the standard value.

Standard value: 0.4V±0.5dB

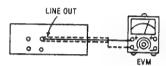


Fig. 3

# PLAYBACK FREQUENCY RESPONSE

1. Playback the frequency response portion (315Hz, 12.5kHz~63Hz, -20dB) of the test tape (QZZCFM).

 Assure that the frequency response is within the range shown in Fig. 6 for both L-CH and R-CH.

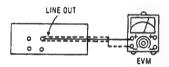


Fig. 4

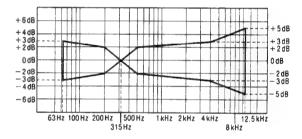
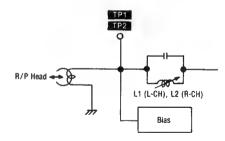


Fig. 5

## **AC BIAS TRAP ADJUSTMENT**

 Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record mode.

 Adjust L1 (L-CH) [[L2 (R-CH)]] so that the output voltage between TP1 (TP2) and GND is less than the minimum value.



#### **OVERALL FREQUENCY RESPONSE**

- Insert the normal blank test tape (QZZCRA) and set the unit to the record pause mode.
- Apply a reference input signal (1 kHz, -24dB) through an attenuator.
- Attenuate the signal by 20dB and adjust the frequency from 50Hz~10kHz.
- 4. Record the frequency sweep.
- Playback the recorded signal and assure that it is within the range shown in Fig. 8 in comparison to the reference frequency (1kHz).
- If it is not within the standard range, adjust VR301 (L-CH) and VR302 (R-CH) so that the frequency level is within the standard range.
  - Level up in high frequency range .......Increase the bias current.
- Level down in high frequency range ... Decrease the bias current.
- Repeat steps 2~6 above using the CrO<sub>2</sub> tape (QZZCRX) and the metal tape (QZZCRZ) increasing the frequency range to 12.5 kHz (50 Hz~12.5 kHz).
- 8. Assure that the level is within the range shown in Fig. 9.

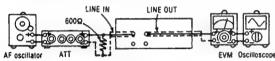


Fig. 10

#### Normal Overall frequency response chart (NR OUT)

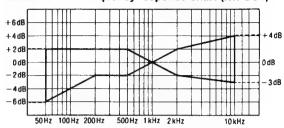


Fig. 8

## CrO<sub>2</sub> Metal Overall frequency response chart (NR OUT)

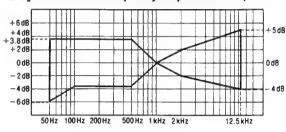
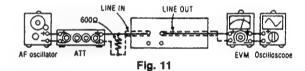


Fig. 9

#### **OVERALL GAIN ADJUSTMENT**

- Insert the normal blank test tape (QZZCRA) and set the unit to the record pause mode.
- Apply a reference input signal (1kHz, -24dB). Attenuate the output so that its level becomes 0.4V.
- 3. Record this input signal.
- Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
- If it is not within the standard value, adjust VR3 (L-CH) and VR4 (R-CH).
- Repeat the step 2~5 above until the output is within the standard value.

Standard value: 0.4 V ± 0.5 dB



# **■ TERMINAL FUNCTION OF IC'S**

# • IC901 (MB88511-224N): MICROCOMPUTER (This microcomputer is used for mechanical operation.)

Pin No.	Mark	I/O Division	Function						
1	DMT	0	Line out mute signal ("H"ON, "L"OFF)						
2	RMT	0	REC AMP mute signal ("H"ON, "L"OFF)						
3	BOS	0	BIAS OSC ON/OFF control signal ("H"OFF, "L"ON)						
4	REC	0	REC LED ON/OFF control signal ("H"OFF, "L"ON)						
5	PLAY	0	PLAY LED ON/OFF control signal ("H"OFF, "L"ON)						
6	EJECT F	0	Power eject motor open control signal ("H"OPEN, "L"CLOSE/STOP)						
7	EJECT R	0	Power eject motor close control singnal ("H"CLOSE, "L"OPEN/STOP)						
8	CAPM	0	Capstan motor ON/OFF control signal ("H"OFF (POWER OFF or ABNORMAL CONDITION), "L"ON)						
9	SOL1 O Trigger solenoid ON/OFF control sign ("H"OFF, "L"ON)								
10	SOL2	D Brake solenoid ON/OFF control sign ("H"OFF, "L"ON)							
11	SOL2C	0	Brake solenoid hold ON/OFF control signal ("H"OFF, "L"ON (FF/REW/MS)						
12	RP (REEL PULSE)	l I Reel nulse signal							
13	RMR	0	Reel motor reverse control signal ("H"REW, "L"STOP/PLAY/FF)						
14	RMF	0	Reel motor foward control signal ("H"FF/PLAY, "L"STOP/REW)						
15	<del>osc</del>	-	Single capstan/Dual capstan select signal ("H"DUAL CAPSTAN, "L"SINGLE CAPSTAN)						
		0	Calibration OSC circuit ON/OFF control signal ("H"OFF, "L"ON)						
16	Ex	- 1	Clock OSC terminal (STALL)						
17	х	0	Clock OSC terminal (6 MHz)						
18	RES	ı	Reset signal ("L"RESET)						
19	OSCF	0	Calibration OSC circuit (400 Hz/10 kHz) select signal ("H"HIGH FREQ. (10 kHz), "L"LOW FREQ. (400 Hz)						
20	POF	ı	AC POWER detect signal						
21	Vss		GND						

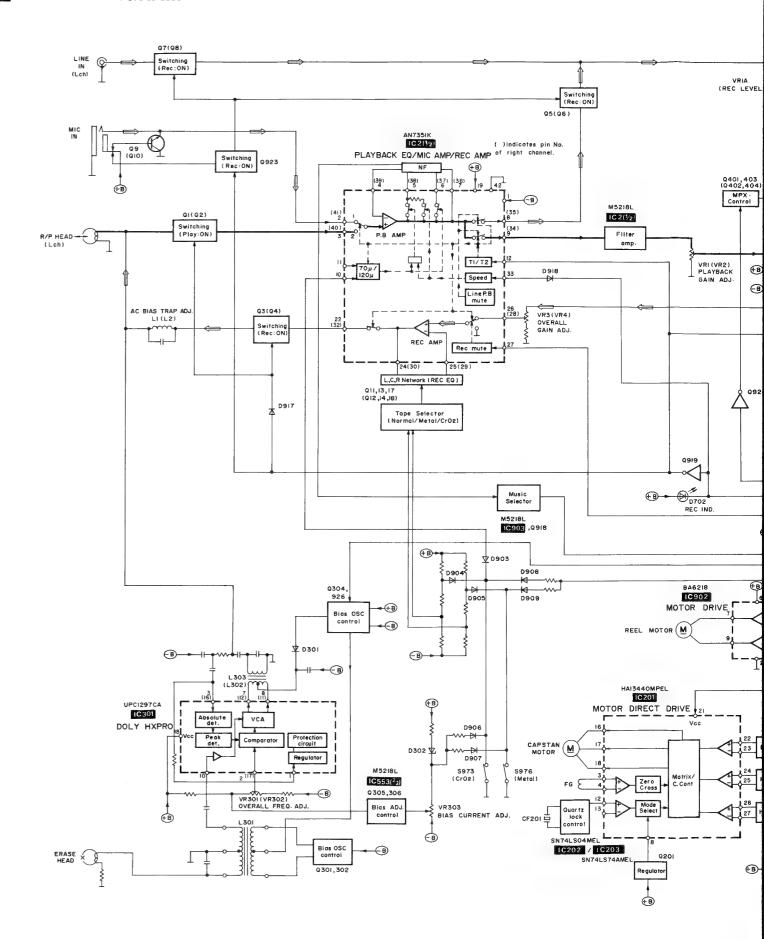
Pin No.	Mark	I/O Division	Function											
		ı	CD direct operation det. signal											
22	DIRECT	0	CD direct/LINE Input select control signal ("H"CD DIRECT, "L"LINE INPUT)											
23	Ē	0	Dolby NR mode select											
24	B		signal B H L H L											
25	MPX	0	MPX coll ON/OFF control signal ("H"MPX OFF, "L"MPX ON)											
		1	Two head/Three head select signal ("H"THREE HEAD, "L"TWO HEAD)											
26	T/S	0	Tape/Source monitor select control ("H"TAPE MONITOR, "L"SOURCE MONITOR)											
27	HALF	ı	Cassette half det. SW terminal ("L"ON)											
28	MODE	1	Mechanism mode SW terminal											
29	ĀRM	1	Auto Rec Mute key signal ("L"PUSH)											
30	AVss	•	Connected to GND											
31	AVR	+GDarah	Connected to GND											
32	AVcc	_	Power supply terminal											
33	KEY 1	I	Key SW input (STOP/FF REW/PLAY/REC/PAUSE/ dbx/C/B/MPX/TIMER REC/TIMER PLAY)											
34	KEY 2	1	Key SW input (MEMORY REPEAT/MEMORY STOP/EJECT/MONITOR/CD DIRECT/ OSC/TEST/REMOTE A/B)											
35	ATS	1	Auto Tape Select SW Input (ATSC/ATSM/EJECT OPEN LEAF SW)											
36	INH	I	REC INH SW Input (REC INH/EJECT MOTOR LEAF SW)											
37	B555	ı	Connected to GND											
38	DISP	0	Serial data signal of FL display (ACTIVE: "H")											
39	MSP	ı	Music select det. signal ("H"NO SIGNAL, "L"ON SIGNAL)											
40	MEMORY PULSE	1	Memory Pulse signal											
41	REMOCON	ı	Remote control serial data ("L" for 50 ms. with counter "0000")											
42	Vcc	_	Power supply terminal											

# • IC551 (HD404302SA07): MICROCOMPUTER (This microcomputer is used for FL meter operation.)

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	S5	0		22	AVcc	_	Power supply terminal
2	S6	0	Segment signal for FL display	23	VR IN	I	Rec level control (VR MAX+5V)
3	<b>S</b> 7	0		24	FIN	l	Function key terminal (COUNTER RESET/COUNTER MODE/APRS)
4	Vdisp		Pull down power supply terminal (-Vcc)	25	SIG L	1	LCH level signal
5	S8	0		26	SIG FI	1	RCH level signal
6	S9	0		27	AVss	_	Connected to GND
7	S10	0		28	RESET		Reset terminal (with Reset: "H")
8	S11 .	0		29	TEST	'	Test terminal
9	S12	0		30	OSC 1	0	1000 tollinia
10	S13	0		-			Clock OSC terminal (4MHz)
11	S14	0	Segment signal for FL display	31	OSC 2	ı	
12	S15	0		32	Vcc	ı	Power supply terminal
13	S16	0		33	G1	0	
14	S17	0		34	G2	0	
15	S18	0		35	G3	0	Grid pignal for El diaplay
16	S19	0		36	G4	0	Grid signal for FL display
$\vdash$			8.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	37	G5	0	
17	RPT	I	Reel pulse signal of tape up reel	38	G6	0	
18	RPS	1	Reel pulse signal of supply reel	39	S1	0	····
19	MP	0	Memory pulse signal ("L" for 50 ms. with counter "0000")	40	S2	0	Segment signal for FL display
20	DISP	l	Serial data signal (ACTIVE: "H") 41 S3		0	Cognitit algular for i E display	
21	GND	_	GND terminal	42	S4	0	

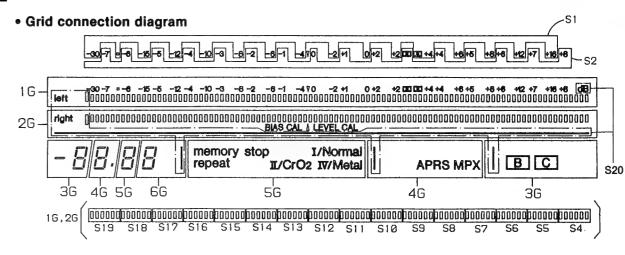
- 15 -

# **■ BLOCK DIAGRAM**



— 16 —

# **■ INTERNAL CONNECTION OF FL**

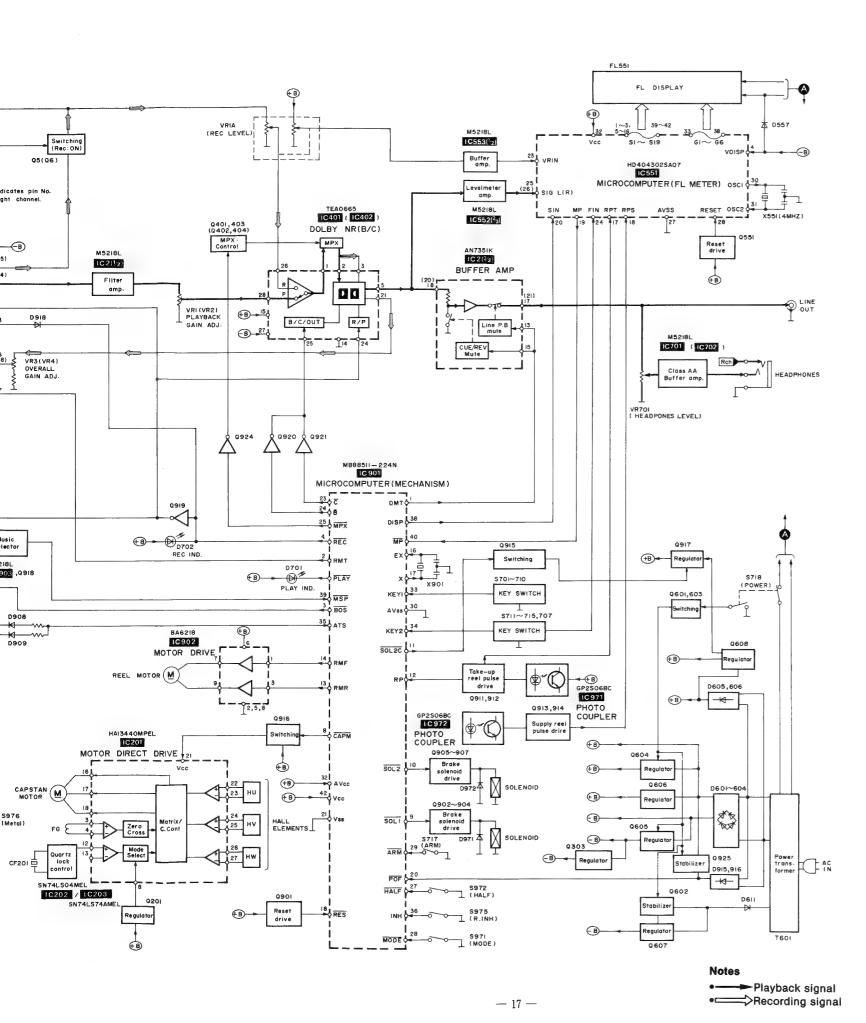


#### Anode connection table

	1G	2G	3G	4G	5G	6G
S1	S1	LEVEL CAL	-	APRS	-	-
S2	S2	BIAS CAL	-	-	-	-
S3	<b>Y</b>	A	-	-	•	-
S4	IIIIII	IIIIII	-	-	-	-
S5	IIIIII	IIIIII	-	-	-	-
S6	IIIIII	111111	-	-	memory	-
S7	IIIIII	111111	•	-	repeat	-
S8	IIIIII	IIIIII	-	-	stop	-
S9	111111		В	-	•	
S10	IIIIII		С	-	I /Normal	-
S11	IIIIII		_	MPX	II/CrO <sub>2</sub>	-
S12	IIIIII		1000mag	¥	IV/Metal	-
S13	IIIIII		а	a	a	a
S14		IIIIII	Ъ	Ъ	b	Ъ
S15	111111		f	f	f	f
S16	IIIIII		g	g	g	g
S17	IIIIII		С	С	С	С
S18			e	е	е	е
S19	111111		d	d	d	d
S20 (dB)	left dB	right			-	

## • Pin connection

PIN NO.		40	39	38	37	36	3	5 3	4	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTIO	ON	N P	N P	N P	N P	S 19	1	8 1	S 7	S 16	S 15	S 14	S 13	S 12	S 11	S 10	S 9	S 8	S 7	S 6	S 5	S 4	S 3	S 2	S 1	N C	6 G	5 G	4 G	3 G	2 G	1 G	S 20	N P	F 1	F 1						
PIN NO.		55	54	53	52	51	5	0 4	9	48	47	46	45	44	43	42	41	]																								
CONNECTIO	NC	F 2	F 2	N P	N P	N P	N F	1 1	N P	N P	N P	N P	N P	N P	N P	N P	N P																									



# ■ SCHEMATIC DIAGRAM

(Parts list on pages 34, 35, 42~44.)

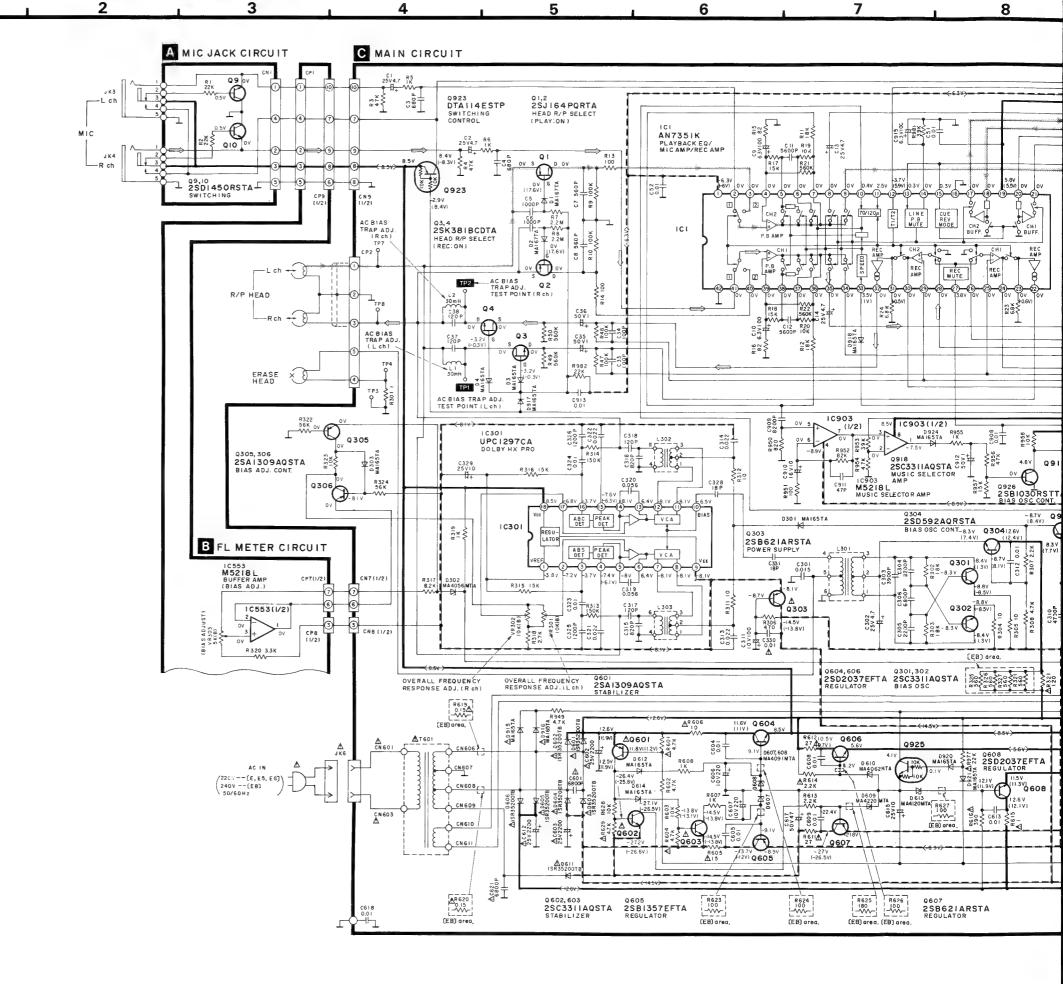
(This schematic diagram may be modified at any time with development of new technology.)

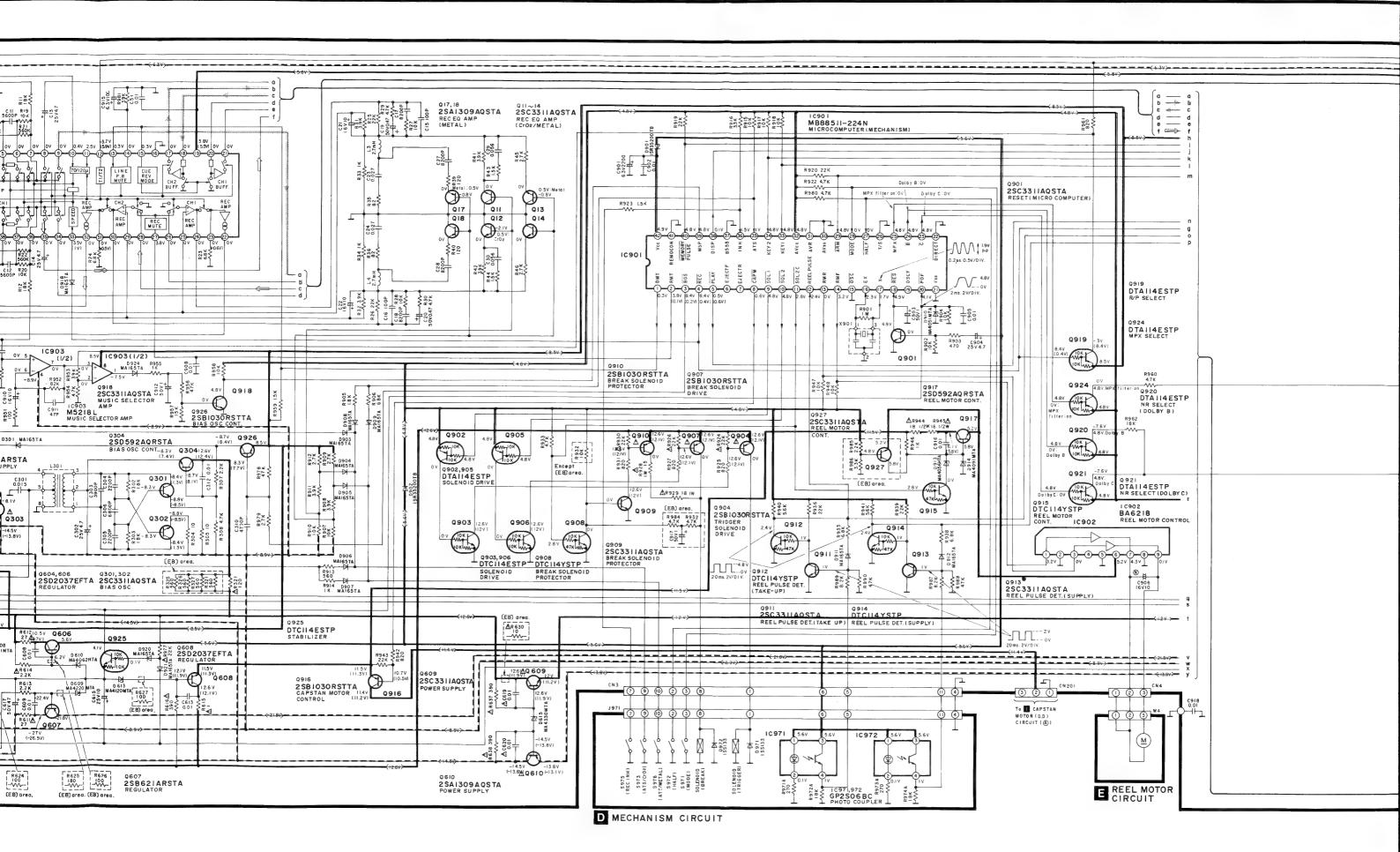
- \$701 : Stop switch (stop) in "off" position.
- S702 : F.F. switch (ff) in "off" position.
- S703 : Rew switch (rew) in "off" position.
- \$704 : Playback switch (Play) in "off" position.
- \$705 : Record switch (rec) in "off" position.
- \$706 : Pause switch (pause) in "off" position.
- \$707 : Dolby noise-reduction switch (Dolby NRC) in "off" position.
- \$708 : Dolby noise-reduction switch (Dolby NR B) in "off" position.
- \$709 : Multiplex filter switch (MPX filter) in "off" position.
- S710 : Timer switch (timer) in "off" position.
- S711 : Counter reset switch (counter reset) in "off" position.
- \$712 : Counter mode switch (counter mode) in "off" position.
- \$713 : Meter range switch (meter range) in "off" position.
- S714: Memory mode switch (memory repeat) in "off" position.
- \$715: Memory mode switch (memory stop) in "off" position.
- S716 : APRS switch (APRS) in "off" position.
- S717: Automatic-record-muting switch (auto rec mute) in "off"
- S718: Power switch (standby & /on) in "on" position.
- \$971 : Mode switch in "off" position.
- S972 : Cassette half detection switch in "off" position.
- S973 : ATS (CrO<sub>2</sub>) switch in "off" position.
- S975 : Rec Inhibit switch in "off" position.
- S976 : ATS (Metal) switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
- $1 K = 1,000 (\Omega), 1 M = 1,000 k (\Omega)$
- Capacity are in micro-farads (µF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
- ( ) .....Voltage values at record mode. For measurement us EVM.
- Important safety notice
- Components identified by  $\triangle$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- ( ----< + B >---- ) indicates + B (bias).
- ( same B > see ) indicates B (bias).
- ( ) indicates the flow of the playback signal.
- ( ) indicates the flow of the record signal.

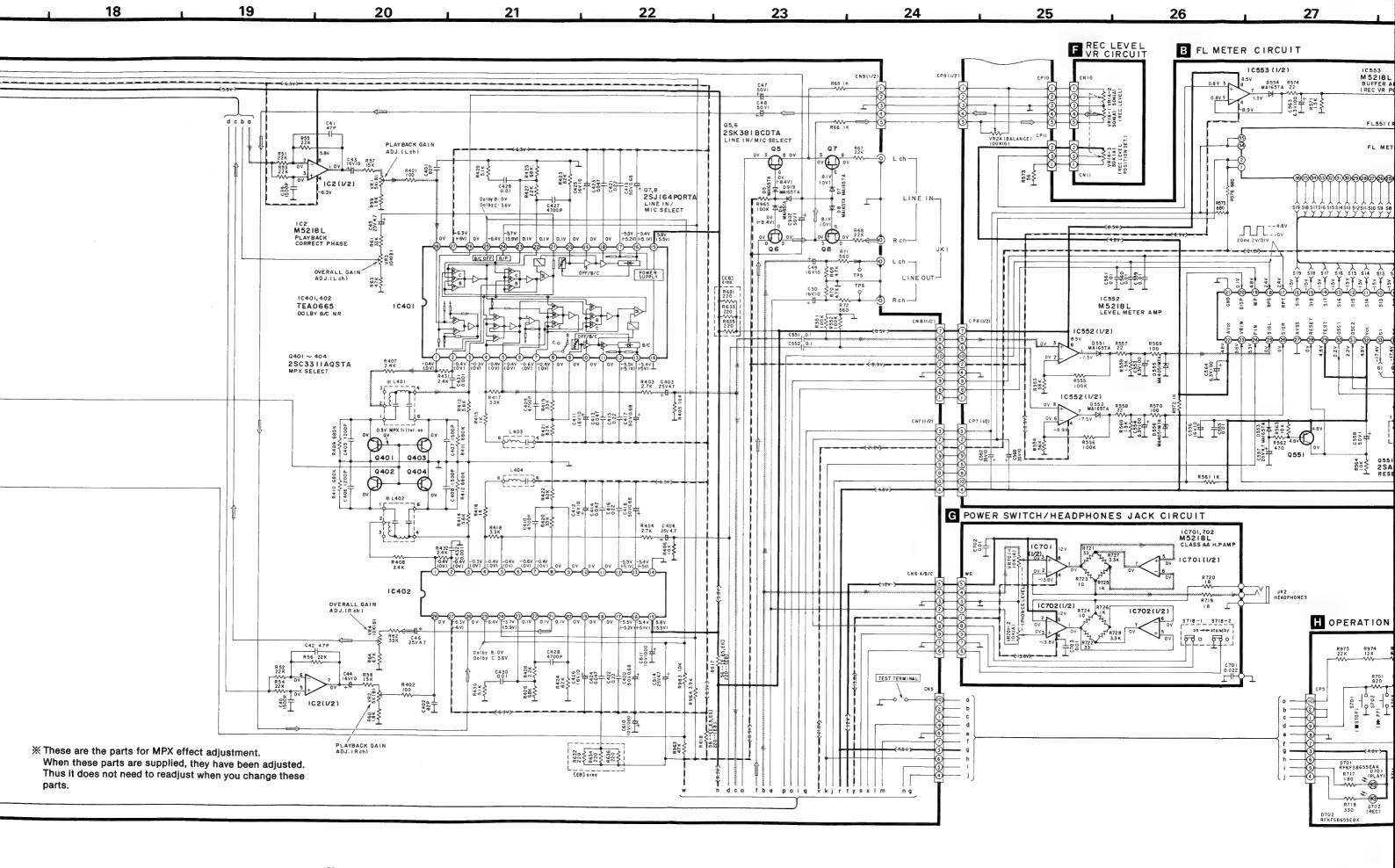
# \* Caution!

IC and LSI are sensitive to static electricity.

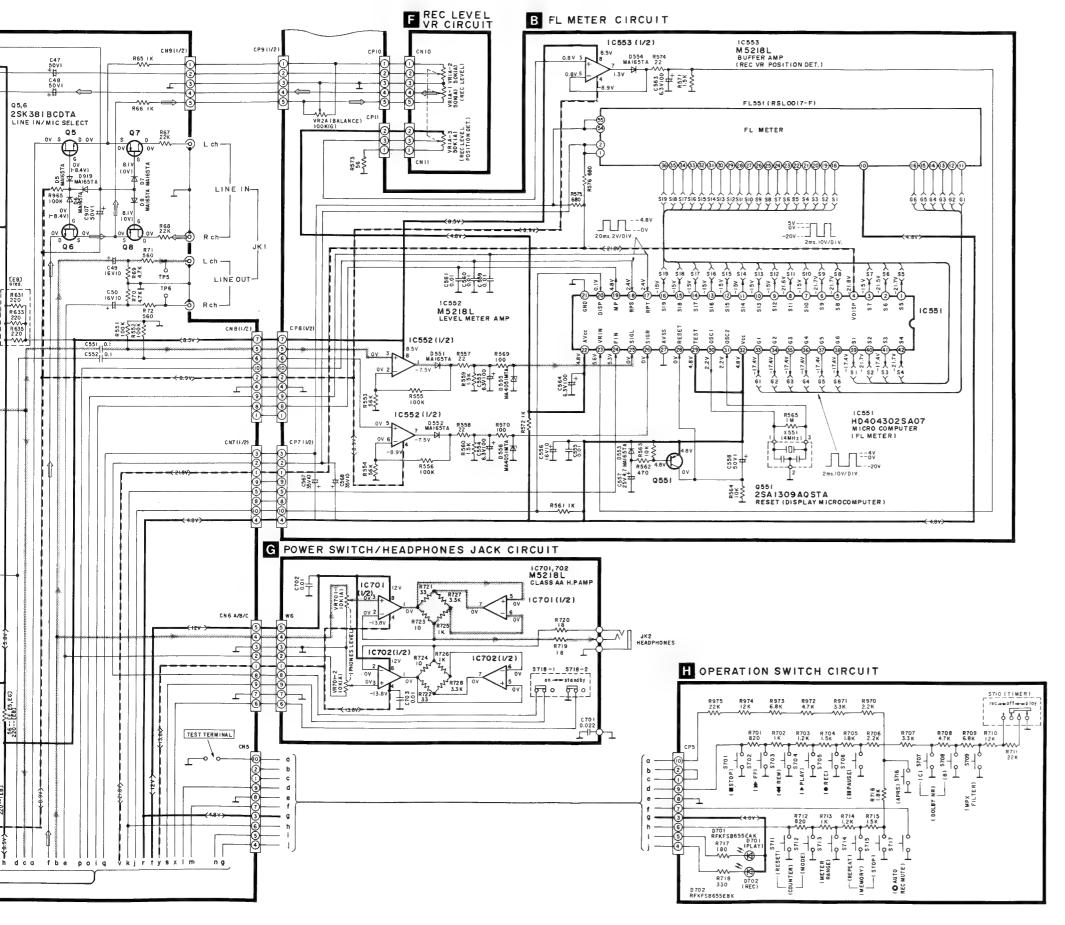
- Secondary trouble can be prevented by taking care during repair.
- \* Cover the parts boxes made of plastics with aluminum foil.
- \* Ground the soldering iron.
- \* Put a conductive mat on the work table.
- \* Do not touch the legs of IC or LSI with the fingers directly.

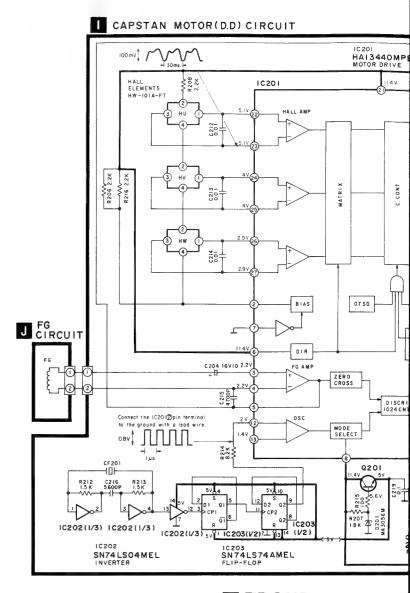












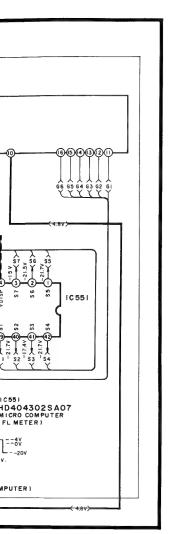
# **■ TROUBLESHOOTI**

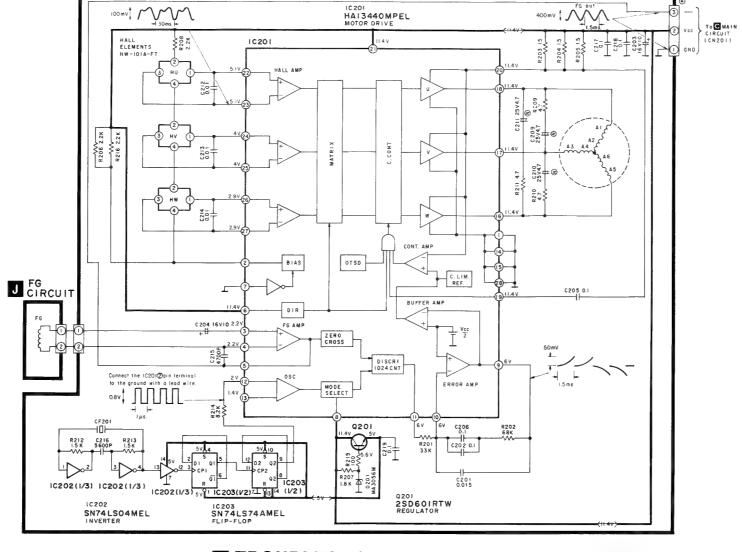
	Problem		
1.	The motor does not rotate.	1. 2. 3.	r 1
2.	The motor does not rotate properly. (When pressed, it stops at certain angles. Sometimes it does not rotate even if power is ON.)	1. 2.	1
3.	The motor is out of control.	1.	1
4.	Abnormal wow	1.	5

Note: Check the points marked with pin ② to GND with a lead wire the coil, heating the IC.)

29 , 30 , 31 , 32 , 33 , 34 , 35

CAPSTAN MOTOR(D.D) CIRCUIT



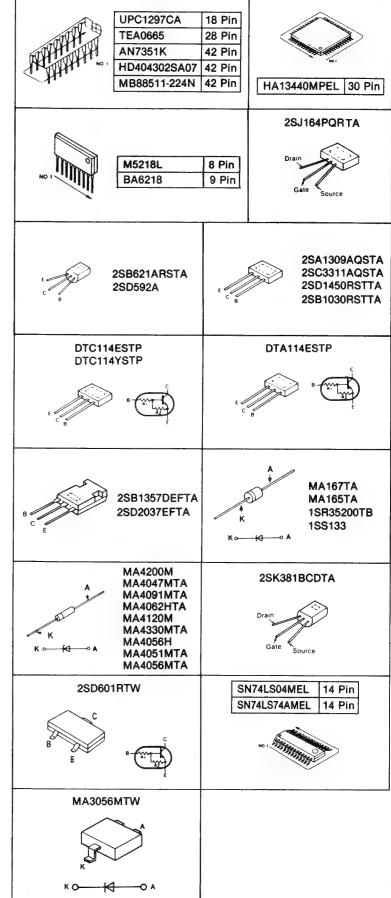


# **■ TROUBLESHOOTING OF DIRECT DRIVE MOTOR**

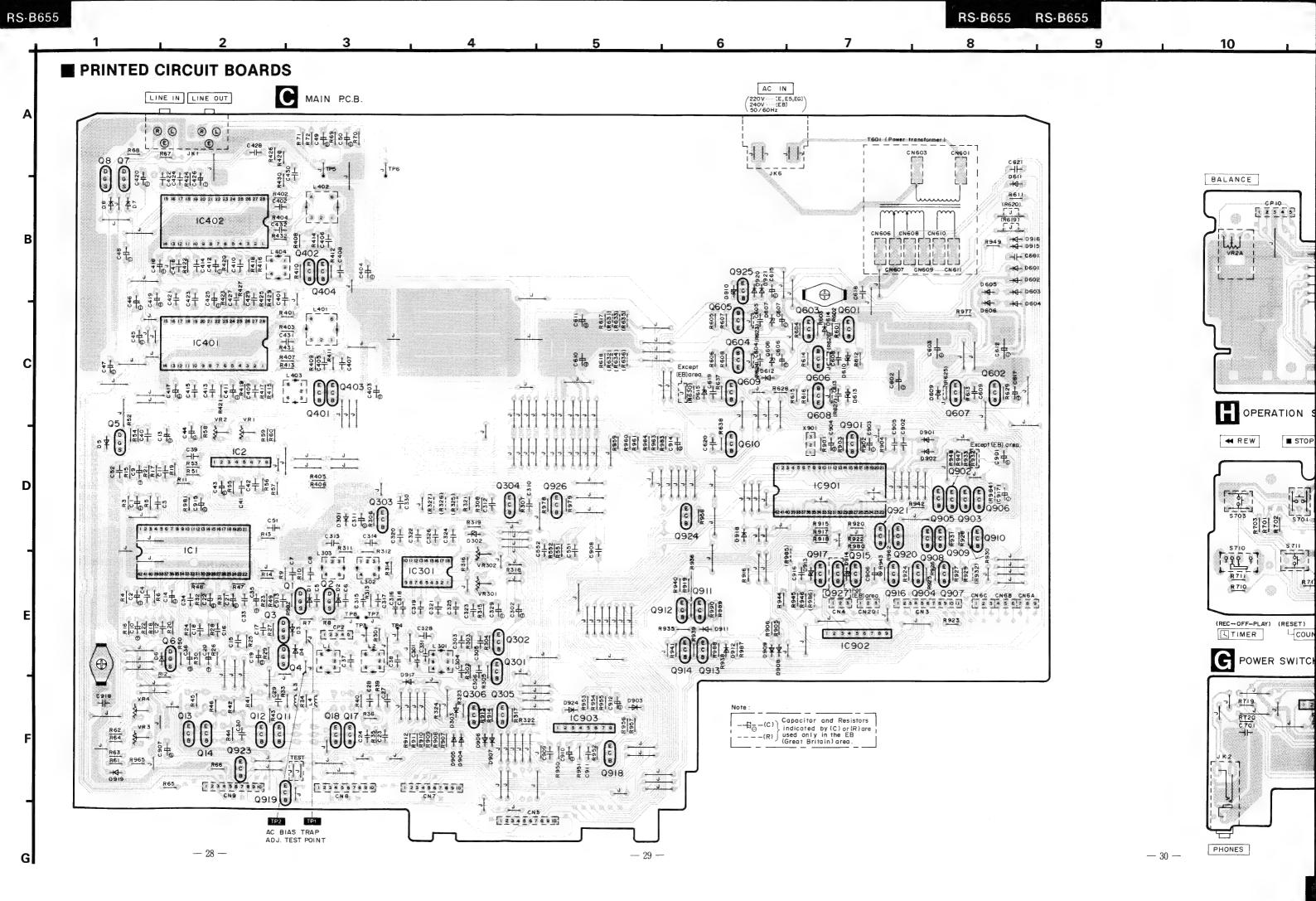
	Problem	Possible Cause	Check Points
1.	The motor does not rotate.	No power supply (+12V)     The Hall element has failed (Current does not flow).     The ceramic (or crystal) does not oscillate.	Check the voltage applied to the connector. Check the DC potential on IC pins ②∼②. Check the waveform of IC pin ③.
2.	The motor does not rotate properly. (When pressed, it stops at certain angles. Sometimes it does not rotate even if power is ON.)	The coil is broken or not properly soldered.     Output of the Hall element is not proper.	*Check the conductance of the coil. If normal, the resistances between IC pins (6~(6), (7)~(8), (6~(8) will reach 20 ohms. • Check the waveform of IC pins (2~(7)).
3.	The motor is out of control.	1. The FG coil is broken.	Check the waveform of IC pin ⑤.     Check if the FG coil is broken.
4.	Abnormal wow	Same as those described for problem 2.	

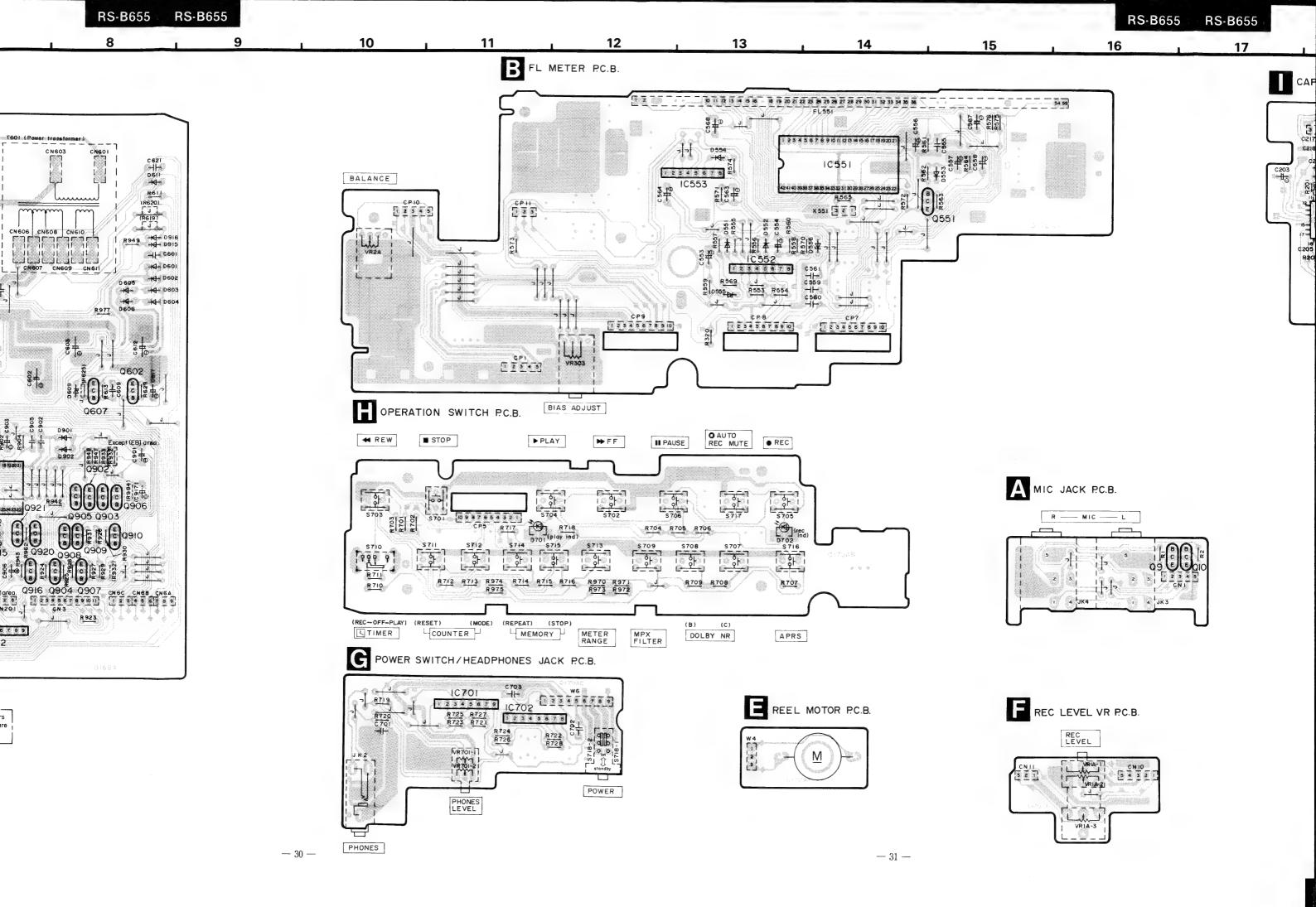
Note: Check the points marked with an asterisk (\*) by removing the DD motor control P.C.B. and then connecting IC pin ② to GND with a lead wire. (After the DD motor control P.C.B. is removed, current will start flowing through the coil, heating the IC.)

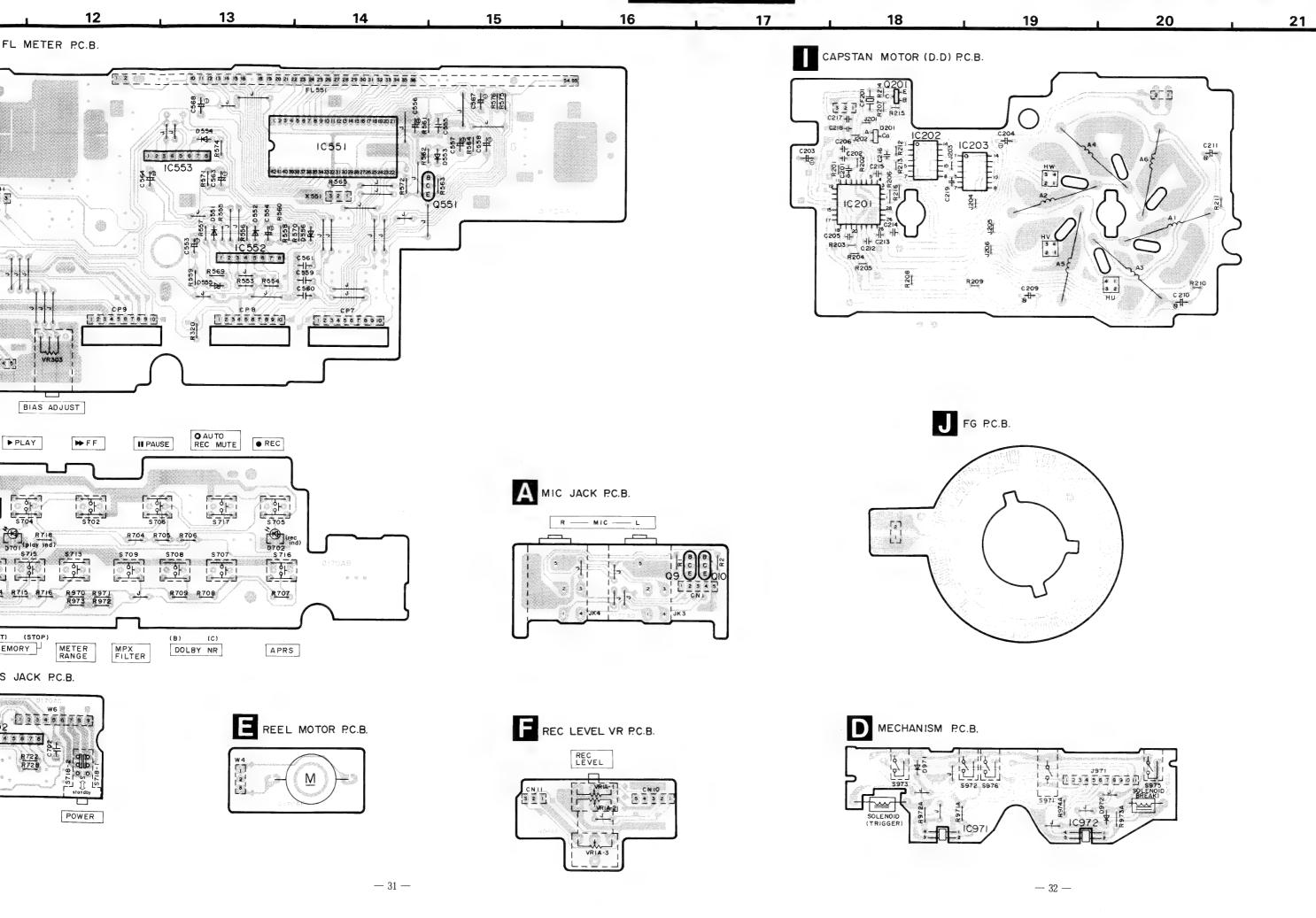
# TRANSISTORS AND DIODES



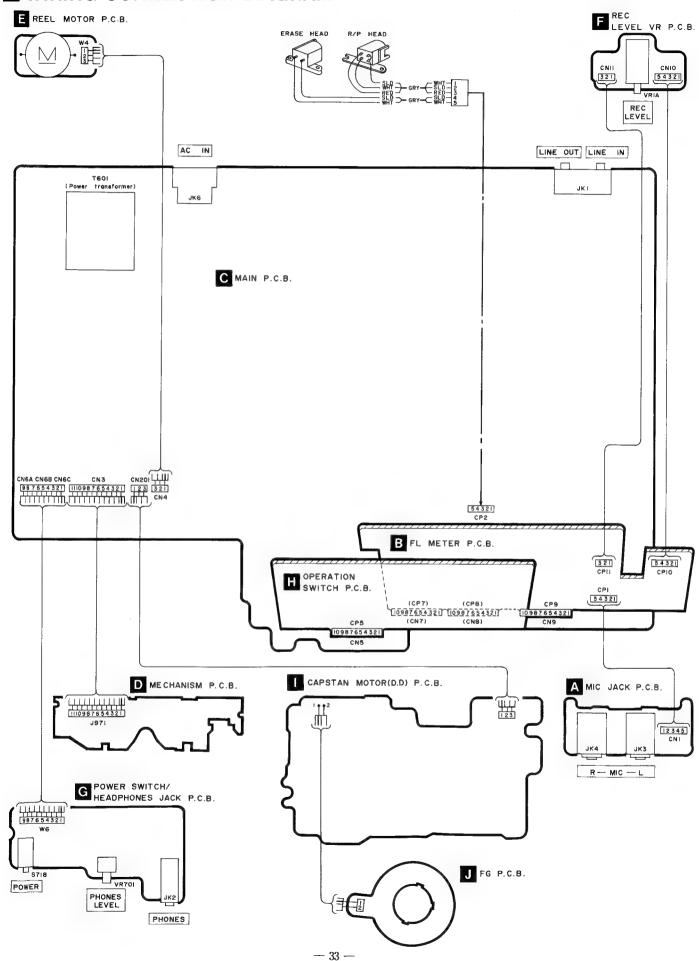
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# **■ WIRING CONNECTION DIAGRAM**



# **REPLACEMENT PARTS LIST**

Notes: \* Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

\* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

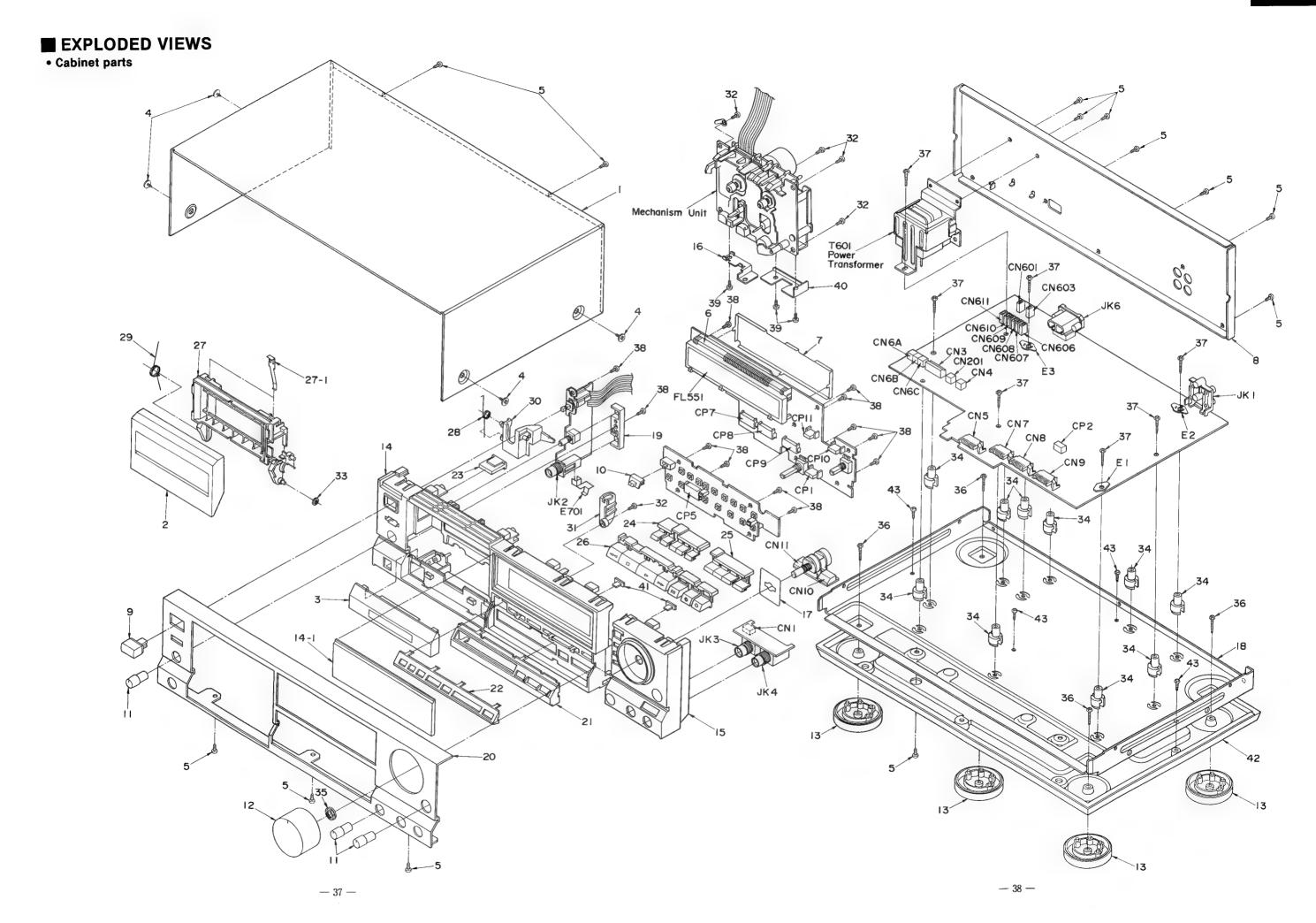
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				Q905	DTA114ESTP	TRANSISTOR	
		INTEGRATED CIRCUIT (S)		Q906	DTC114ESTP	TRANSISTOR	
				Q907	2SB1030RSTTA	TRANSISTOR	Δ
IC1	AN7351K	IC, PLAYBACK EQ. /MIC AMP		Q908	DTC114YSTP	TRANSISTOR	
IC2	M5218L	IC, PLAYBACK CORRECT PHASE		Q909	2SC3311AQSTA	TRANSISTOR	
IC201	HA13440MPEL	IC, MOTOR DRIVE		Q910	2SB1030RSTTA	TRANSISTOR	Δ
IC202	SN74LSO4MEL	IC, INVERTER		Q911	2SC3311AQSTA	TRANSISTOR	
IC203	SN74LS74AMEL	IC, FLIP-FLOP		Q912	DTC114ESTP	TRANSISTOR	
IC301	UPC1297CA	IC, DOLBY HX PRO		Q913	2SC3311AQSTA	TRANSISTOR	
IC401, 402	TEA0665	IC, DOLBY B/C NII		Q914	DTC114ESTP	TRANSISTOR	
IC551	HD404302SA07	IC, MICROCOMPUTER; FL METER		Q915	DTC114YSTP	TRANSISTOR	
IC552	M5218L	IC, LEVEL METER AMP		Q916	2SB1030RSTTA	TRANSISTOR	
IC553	M5218L	IC, BUFFER AMP	· · · · · · · · · · · · · · · · · · ·	Q917	2SD592A	TRANSISTOR	
IC701, 702	M5218L	IC, Class AA : H. P. AMP		Q918	2SC3311AQSTA	TRANSISTOR	
IC901	MB88511-224N	IC, MICROCOMPUTER; MECHANICAL		Q919-921	DTA114ESTP	TRANSISTOR	
IC902	BA6218	IC, REEL MOTOR CONTROL		Q923, 924	DTA114ESTP	TRANSISTOR	
IC903	M5218L	IC, MUSIC SELECTOR AMP		Q925	DTC114ESTP	TRANSISTOR	
IC971, 972	GP2S06BC	IC, PHOTO COUPLER		Q926	2SB1030RSTTA	TRANSISTOR	
				Q927	2SC3311AQSTA	TRANSISTOR	(EB)
		TRANSISTOR(S)					
						DIODE (S)	
Q1, 2	2SJ164PQRTA	TRANSISTOR					
Q3-6	2SK381BCDTA	TRANSISTOR		D1, 2	MA167TA	DIODE	
Q7, 8	2SJ164PQRTA	TRANSISTOR		D3-8	MA165TA	DIODE	
Q9, 10	2SD1450RSTA	TRANSISTOR		D201	MA3056MTW	DIODE	
Q11-14	2SC3311AQSTA	TRANSISTOR		D301	MA165TA	DIODE	
Q17, 18	+	TRANSISTOR		D302	MA4056MTA	DIODE	
Q201	2SD601RTW	TRANSISTOR		D303	MA165TA	DIODE	
Q301, 302	2SC3311AQSTA	TRANSISTOR		D551-554	MA165TA	DIODE	
Q303	2SB621ARSTA	TRANSISTOR	Δ	D555, 556	MA4051MTA	DIODE	
Q304	2SD592A	TRANSISTOR		D601-606	1SR35200TB	DIODE	Δ
Q305, 306	2SA1309AQSTA	TRANSISTOR		D607, 608	MA4091MTA	DIODE	
Q401-404	2SC3311AQSTA			D609	MA4220M	DIODE	
Q551	2SA1309AQSTA			D610	MA4062HTA	DIODE	
Q601	2SA1309AQSTA		Δ	D611	1SR35200TB	DIODE	Δ
Q602, 603	2SC3311AQSTA		Δ	D612	MA165TA	DIODE	
Q604	2SD2037EFTA	TRANSISTOR		D613	MA4120M	DIODE	
Q605	2SB1357EFTA	TRANSISTOR		D614	MA165TA	DIODE	
Q606	2SD2037EFTA	TRANSISTOR		D615	MA4330MTA	DIODE	
Q607	2SB621ARSTA	TRANSISTOR		D701	<del> </del>	L. E. D ASS' Y	
Q608	2SD2037EFTA	TRANSISTOR		D702		L. E. D ASS' Y	
Q609	2SC3311AQSTA		Δ	D901, 902	1SR35200TB	DIODE	
Q610	2SA1309AQSTA		Δ	D903	MA165TA	DIODE	Δ
Q901	2SC3311AQSTA			D904-909	MA165TA	DIODE	
Q902	DTA114ESTP	TRANSISTOR		D910	MA4051MTA	DIODE	
Q903	DTC114ESTP	TRANSISTOR		D911, 912	MA165TA	DIODE	
Q904	2SB1030RSTTA		Δ	D913	MA4056H	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
D914	MA4091MTA	DIODE		S712	EVQQTG05R	SW, COUNTER MODE	
D915, 916	MA165TA	DIODE	Δ	S713	EVQQTG05R	SW, METER RANGE	
D917-921	MA165TA	DIODE		S714	EVQQTQ05R	SW, MEMORY REPEAT	
D924	MA165TA	DIODE		S715	EVQQTG05R	SW, MEMORY STOP	
D971, 972	1SS133	DIODE		S716	EVQQTG05R	SW, APRS	
				S717	EVQQTG05R	SW, AUTO REC MUTE	
-		VARIABLE RESISTOR(S)		S718	SSH1230	SW. POWER	
		With Date   Labibion (b)		S971	RSH1A89Z	SW, MODE	
VR1, 2	FVNDYA AOOR53	V. R. PLAYBACK GAIN ADJ.		S972	RSH1A90Z	SW, HALF	
VR1A		V. R, REC. LEVEL CONTROL		S973		SW, ATS	
VR2A		V. R. BALANCE CONTROL	1		RSH1A90Z		-
VR3, 4		<del> </del>		S975	RSH1A90Z	SW, REC INHIBIT	
		V. R. OVERALL GAIN ADJ.		S976	RSH1A90Z	SW, ATS	
VR301, 302		V. R. OVERALL FREQ. ADJ.					
VR303	+	V. R, BIAS CURRENT ADJ.				CONNECTOR(S) AND SOCKET(S)	
VR701	EVU57A043A14	V. R, HEADPHONES CONTROL					
				CN1	SJT30545JQ	CONNECTOR (5P)	
		COIL (S)		CN3	SJSD1105	CONNECTOR (11P)	
				CN4	RJS1A1703	CONNECTORCONNECTOR (3P)	
L1, 2	RLZ0003	COIL		CN5	RJU003K010M	SOCKET (10P)	
L3, 4	SLQX272-1YT	COIL		CN6A-6C	RJS1A1703	CONNECTOR (3P)	
L301	SL09B4-K	COIL		CN7-9	RJU003K010M	SOCKET (10P)	
L302, 303	SL09B1-K	COIL		CN10	SJT30545JQ	CONNECTOR (5P)	
L401, 402	QLM9Z10K	COIL		CN11	SJT30345JQ	CONNECTOR (3P)	
L403, 404	SLM1B8-K	COIL		CN201	RJS1A1703	CONNECTOR (3P)	
				CN201A	RJS2T4ZA	CONNECTOR (2P)	
******		TRANSFORMER (S)		CN601	RJS1A1101	SOCKET(1P)	Δ
	<del> </del>	27227070707070		CN603	RJS1A1101	SOCKET (1P)	Δ
T601	RTP1K4B007-V	POWER TRANSFORMER	(EB) $\triangle$	CN606-611	RJS1A1101	SOCKET (1P)	713
T601		POWER TRANSFORMER					
1001	N1F1N4E000-Y	FOWER TRANSFORMER	(E, E5, EG) <u>∧</u>	CP1	SJS50578JQ	SOCKET (5P)	
		000111 4700 (0)		CP2	SJTD513	CONNECTOR (5P)	
		OSCILLATOR(S)		CP5	RJT003K010	CONNECTOR (10P)	
				CP7-9	RJT003K010	CONNECTOR (10P)	
X551		CERAMIC FILTER		CP10	SJS50578JQ	SOCKET (5P)	
X901	EFOGC6004T4	CERAMIC FILTER		CP11	SJS50378JQ	SOCKET (3P)	
		DISPLAY TUBE				GND PART(S)	
FL551	RSL0017-F	DISPLAY TUBE (FL METER)		E1-3	SNE1004-1	GND PLATE	
				E701	SUSD165	GND SPRING	
		SWITCH(ES)					
		- 10				JACK(S)	
S701	EVQQTG05R	SW, STOP					
5702	EVQQTG05R	SW, F. F.		JK1	SJF3069N	TERMINAL BOARD	
5703	EVQQTG05R	SW, REW.		JK2	SJJ146B	JACK, HEADPHONES	
5704		SW, PLAYBACK		JK3, 4	RJJ65MS01	JACK, MIC	
							Δ
3705		SW, RECORD		JK6	SJS9236	AC INLET	Δ
3706	EVQQTG05R	SW, PAUSE					
5707	EVQQTG05R	SW, DOLBY NR C				CERAMIC FILTER (S)	
5708		SW, DOLBY NR B					
3709	EVQQTG05R	SW, MPX FILTER		CF201	RSXA3M74S01	CERAMIC FILTER	
5710	SSS166	SW, TIMER					
S711	EVQQTG05R	SW, COUNTER RESET				JAMPER(S)	

Notes: \* Important safety notice:
 Components identified by △ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

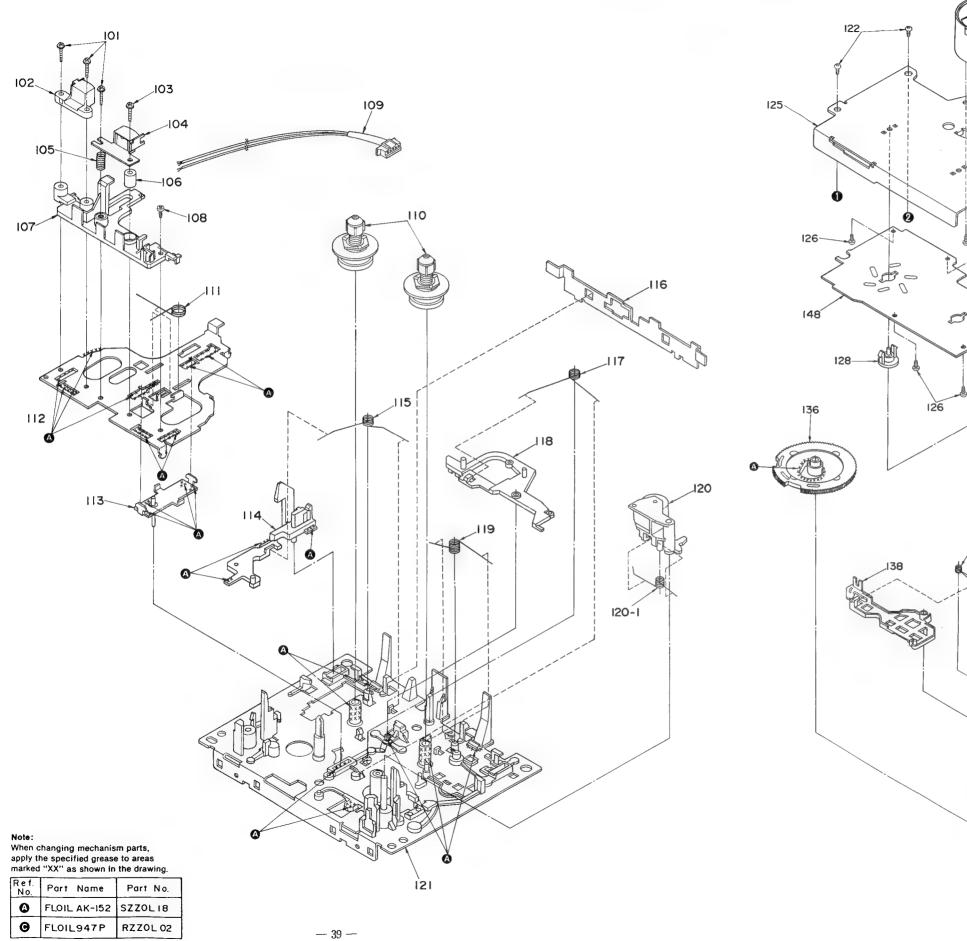
\* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

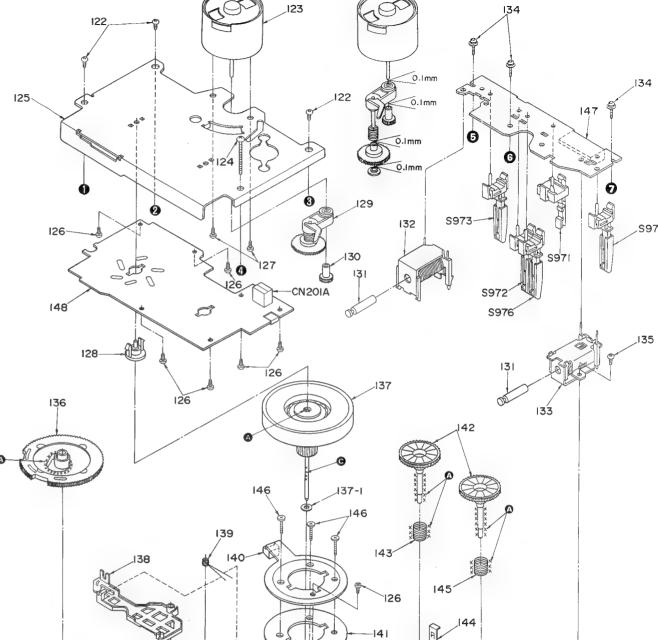
2 F 3 F 4 S 5 Y 6 F 7 F 8 F 8 F 8 F 8 F 8 F 8 F 8 F 8 F 8 F	RKM0036-K RYF0027 RYQ0027 SNE2129-1 XTBS3+8JF21 RMN0021 RSC0048 RGR0024-A	CABINET AND CHASSIS  CABINET CASSETTE LID ORNAMENT SCREW SCREW FL HOLDER SHIELD PLATE		40 41 42 43	RSC0076 RGL0030 RKU0009 XTB3+10G	SHIELD PLATE PANEL LIGHT BOTTOM BOARD SCREW	
2 F F F F F F F F F F F F F F F F F F F	RYF0027 RYQ0027 SNE2129-1 XTBS3+8JF21 RMN0021 RSC0048 RGR0024-A	CABINET CASSETTE LID ORNAMENT SCREW SCREW FL HOLDER		42	RKU0009	BOTTOM BOARD SCREW	
2 F F F F F F F F F F F F F F F F F F F	RYF0027 RYQ0027 SNE2129-1 XTBS3+8JF21 RMN0021 RSC0048 RGR0024-A	CASSETTE LID ORNAMENT SCREW SCREW FL HOLDER				SCREW	
2 F F F F F F F F F F F F F F F F F F F	RYF0027 RYQ0027 SNE2129-1 XTBS3+8JF21 RMN0021 RSC0048 RGR0024-A	CASSETTE LID ORNAMENT SCREW SCREW FL HOLDER		43	XTB3+10G		
3 F 4 S 5 Y 6 F 7 F 8 F 8 F 8 F 8 F 8 F 8 F	RYQ0027 SNE2129-1 XTBS3+8JFZ1 PMN0021 RSC0048 RGR0024-A	ORNAMENT SCREW SCREW FL HOLDER					
4 S 5 Y 6 F 7 F 3 F 3 F	SNE2129-1 XTBS3+8JF21 PMN0021 RSC0048 RGR0024-A	SCREW SCREW FL HOLDER					1
5	XTBS3+8JFZ1 RMN0021 RSC0048 RGR0024-A	SCREW FL HOLDER				PACKING MATERIAL	
6 F 7 F 3 F 3 F 3 F 3 F	RMN0021 RSC0048 RGR0024-A	FL HOLDER					
7 F 3 F 3 F 3 F	RSC0048 RGR0024-A		<u> </u>	P1	RPG0255	CARTON BOX	
B F B F B F	RGR0024-A	SHIELD PLATE		P2	RPN0178	PAD, FRONT/BACK	
B F B F				P3	SPS5185	PAD, ACCESSORIES	
B F	RGRO024-C	REAR PANEL	(E)	P4	SPP756	PROTECTION COVER	
3 F		REAR PANEL	(E5)				
	RGROO24-E	REAR PANEL	(EB)			ACCESSORIES	
} F	RGRO024-L	REAR PANEL	(EG)				
14	RGU0030	BUTTON, POWER		A1	RQF0239	INSTRUCTION MANUAL	(EG)
10 F	RGV0022	KNOB, TIMER		A1	RQF0240	INSTRUCTION MANUAL	(E, E5)
11 F	RGW0032	KNOB, BALANCE LEVEL		A1	RQF0241	INSTRUCTION MANUAL	(EB)
12 F	RGW0033	KNOB, REC LEVEL		A2	SFDAC05E03	POWER CORD	(E, E5, EG)
	RKA0009-1	FOOT		A2	SJA193-1	POWER CORD	(EB)
	RFKNSB655EAK	FRONT GRILLE ASS' Y (1)		A3	SJP2249-3	STEREO CONNECTION CABLE	
	RKW0038	TRANSPARENT PLATE					
	RFKNSB655EBK	FRONT GRILLE ASS' Y (2)		-			
	RMC0040	BRACKET		1	1		
		SHIELD PLATE		1			
-	RMK0026-1	CHASSIS		1	<b> </b>		
	RMN0022	ORNAMENT					
	RFKGSB655E-K	FRONT PANEL ASS' Y		11		MECHANISM UNIT	
		ORNAMENT, BUTTON (A)			1		
		ORNAMENT, BUTTON (B)		MECH1	RAA0802	MECHANISM ASS' Y	<del>                                     </del>
		BUTTON, EJECT		- Interior	10210002	MEGENITUM INDO I	
		BUTTON, COUNTER			1	PRINTED CITCUIT BOARDS	<del> </del>
		BUTTON, NOISE REDUCTION				THINTED GITCOIT DUANDS	-
		BUTTON, OPERATION		PWB1	REP0306A	MAIN P. C. B. ASS' Y	(E, E5, EG)
		CASSETTE HOLDER		PWB1	REPO306B	MAIN P. C. B. ASS'Y	(EB)
		SPRING, TAPE PRESSURE			MELANGOD	mesta c. o. D. Moo I	(ED)
		SPRING TAPE PRESSURE	-	PWB2	REP0307A	SUB P. C. B. ASS' Y	
		SPRING		- F #DZ	INCLOSOLV	DOD F. V. D. NOO I	-
		EJECT LEVER			<del> </del>		-
		DAMPER GEAR ASS' Y					-
-							
		SCREW					-
		WASHER					-
		HOLDER		┨┝──-			-
		NUT					
	XTB3+16G	SCREW			ļ		
	XTB3+20J	SCREW		<b></b>			
		SCREW		1		ļ	



(Bottom view)

# Mechanical parts (Top view)





Ref. No.	Part Name	Part No.
0	FLOIL AK-152	SZZOL 18
0	FLOIL947P	RZZOL 02

# **■ REPLACEMENT PARTS LIST**

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				148	REP0268A	STATER P. C. B. ASS' Y	
		MECHANISM PARTS LIST					
01	QHQ1361A	SCREW		1			
02	SJH96-1	E HEAD		1			
03	RHE5201ZA	SCREW		1			4/10° -
.04	RJH4C35GZAM	R/P HEAD					
05	QBC1278A	SPRING		1			*************
.06		SPACER		1	<u> </u>		
.07		HEAD SPACER		1			
08	XTN2+5F	SCREW		1	<del>                                     </del>		4.20
.09		LEAD WIRE BLOCK		11			
10	RXR0001	REEL TABLE		1			
11		SPRING		11			
12	RMA0047B	HEAD BASE		1			
13		MAIN ROD ASS' Y		1			
.14		EJECT ROD (L)		1	<del>                                     </del>		
.15		SPRING SPRING					
.16	RUB502Z	LEVER		╂			
.17	RME0020	SPRING					
				┨			
.18		BRAKE LEVER		<u> </u>			
.19		SPRING					
20		PINCH ROLLER ARM					
20-1		SPRING	,	╢——			
.21		CHASSIS ASS' Y					
.22		SCREW		<b>∐</b>			
.23		REEL MOTOR		<b> </b>			
24		SCREW					
.25		FLYWHEEL PLATE		<b> </b>			
.26		SCREW					
27		SCREW		1			
.28		THRUST BEARING					
.29		GEAR ASS' Y					
30		REEL MOTOR GEAR					
31	RUB428Z	MOVING IRON CORE					
.32	RSJ0003	SOLENOID					
33	RXQ0011	BRAKE SOLENOID					
34	XTW2+8S	SCREW					
35	XTN26+4F	SCREW					
36	RDG0030	MAIN GEAR					
37	RXF0008	FLYWHEEL					
37-1	RNW139ZA	WASHER					
38	RML0037	LEVER					
39	RUW147ZA	SPRING					
40		CONNECTOR (2P)					
41		FG YOKE					
42		REEL TABLE GEAR					
		SPRING		1	<del>                                     </del>		
		TAPE PRESSURE SPRING			<del> </del>		
		SPRING		1	<del> </del>		
		SCREW		-			
		CONNECTOR (11P)		-	<del> </del>	<del>                                     </del>	



# **■ RESISTORS & CAPACITORS**

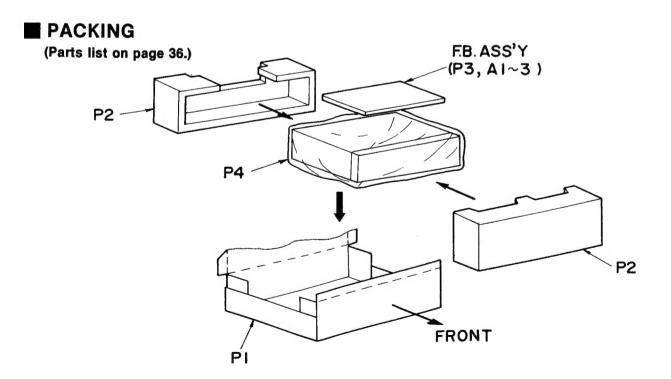
Notes : \* Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)

\* Resistance values are in ohms, unless specified otherwise, 1K=1,000(0HM) , 1M=1,000k(0HM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Val	ues & l	Remarks	Ref. No.	Part No.	Val	ues & F	Remarks
			R304, 305	ERDS2TJ100T	1/4W	10		R602	ERDS2TJ472T	1/4W	4. 7K	
		RESISTORS	R306	ERDS2TJ471T	1/4W	470	1	R603	ERDS2TJ103T	1/4W	10K	
			R307	ERDS2TJ222T	1/4W	2. 2K		R604	ERDS2TJ472T	1/4W	4. 7K	Δ
R1, 2	ERDS2TJ223T	1/4W 22K	R308	ERDS2TJ472T	1/4W	4. 7K		R605	ERDS1FVJ150T	1/2W	15	(E, E5, EG)
R3, 4	ERDS2TJ473T	1/4W 47K	R311, 312	ERDS2TJ100T	1/4W	10	-					Δ
R5, 6	ERDS2TJ102T	1/4W 1K	R313, 314	ERDS2TJ154T	1/4W	150K		R605	ERD2FCVG150T	1/4W	15	(EB) <u>∧</u>
R7, 8	ERDS2TJ225T	1/4W 2.2M	R315, 316	ERDS2TJ153T	1/4W	15K		R606	ERDS1FVJ100T	1/2W	10	(E, E5, EG)
R9, 10	ERDS2TJ104T	1/4W 100K	R317	ERDS2TJ822T	1/4W	8. 2K						Δ
R11, 12	ERDS2TJ183T	1/4W 18K	R318	ERDS2TJ272T	1/4W	2. 7K		R606	ERD2FCVG100T	1/4W	10	(EB) <u>∧</u>
R13, 14	ERDS2TJ101T	1/4W 100	R319	ERDS2TJ102T	1/4W	1K		R607, 608	ERDS2TJ102T	1/4W	1K	
R15, 16	ERDS2TJ820T	1/4W 82	R320	ERDS2TJ332T	1/4W	3. 3K		R611, 612	ERDS1FVJ270T	1/2W	27	(E, E5, EG)
R17, 18	ERDS2TJ153T	1/4W 15K	R321	ERDS1FVJ121T	1/2W	120	(E, E5, EG)					Δ.
R19, 20	ERDS2TJ103T	1/4W 10K					Δ	R611, 612	ERD2FCVG270T	1/4W	27	(EB) A
R21, 22	ERDS2TJ564T	1/4W 560K	R321	ERDS1FVJ561T	1/2W	560	(EB) <u>∧</u>	R613	ERDS2TJ222T	1/4W	2. 2K	
R23, 24	ERDS2TJ682T	1/4W 6.8K	R322	ERDS2TJ563T	1/4W	56K		R614	ERDS2TJ222T	1/4W	2. 2K	
R25, 26	ERDS2TJ223T	1/4W 22K	R323	ERDS2TJ103T	1/4W	10K	=	R615	ERDS2TJ1ROT	1/4W	1. 0	Δ
R27, 28	ERDS2TJ103T	1/4W 10K	R324	ERDS2TJ563T	1/4W	56K		R616	ERDS2TJ391T	1/4W	390	Δ
R29, 30	ERDS2TJ472T	1/4W 4.7K	R325-327	ERDS1FVJ561T	1/2W	560	(EB)	R617, 618	ERDS2TJ221T	1/4W	220	(EB)
R31, 32	ERDS2TJ392T	1/4W 3.9K	R401, 402	ERDS2TJ101T	1/4W	100	(00)	R617, 618	ERDS2TJ560T	1/4W	56	(E, E5, EG)
R33, 34	ERDS2TJ102T	1/4W 1K	R403, 404	ERDS2TJ272T	1/4W	2. 7K		R619, 620	ERQ16NKR15E	1/6W	0. 15	(EB) <u>∧</u>
R35, 36	ERDS2TJ820T	1/4W 82	R405, 406	ERDS2TJ103T	1/4W	10K		R623, 624	ERDS2TJ101T	1/4W	100	(EB)
R39, 40	ERDS2TJ121T	1/4W 120	R407, 408	ERDS2TJ242	1/4W	2. 4K		R625	ERDS2TJ181T	1/4W	180	(EB)
R41, 42	ERDS2TJ392T	1/4W 3.9K	R409-412	ERDS2TJ684T	1/4W	680K		R626, 627	ERDS2TJ101T	1/4W	100	(EB)
R43, 44	ERDS2TJ152T	1/4W 1.5K	R413, 414	ERDS2TJ562T	1/4W	5. 6K		R628	ERDS2TJ103T	1/4W	10K	(22)
R45, 46	ERDS2TJ272T	1/4W 2.7K	R415, 416	ERDS2TJ102T	1/4W	1K		R629	ERDS2TJ472T	1/4W	4. 7K	<b>A</b>
R47, 48	ERDS2TJ104T	1/4W 100K	R417, 418	ERDS2TJ332T	1/4W	3. 3K		R630	ERD2FCVG100T	1/4W	10	(EB) <u>∧</u>
R49, 50	ERDS2TJ564T	1/4W 560K	R419, 420	ERDS2TJ333T	1/4W	33K		R631-636	ERDS2TJ221T	1/4W	220	(EB)
R51-56	ERDS2TJ223T	1/4W 22K	R421-424	ERDS2TJ823T	1/4W	82K		R637, 638	ERDS2TJ391T	1/4W	390	<u>A</u>
R57, 58	ERDS2TJ153T	1/4W 15K	R425, 426	ERDS2TJ683T	1/4W	68K		R701	ERDS2TJ821T	1/4W	820	
R59, 60	ERDS2TJ182T	1/4W 1.8K	R427, 428	ERDS2TJ222T	1/4W	2. 2K		R702	ERDS2TJ102T	1/4W	1K	
R61, 62	ERDS2TJ333T	1/4W 33K	R429, 430	ERDS2TJ512	1/4W	5. 1K	-	R703	ERDS2TJ122T	1/4W	1. 2K	
R63, 64	ERDS2TJ472T	1/4W 4.7K	R431, 432	ERDS2TJ242	1/4W	2. 4K		R704	ERDS2TJ152T	1/4W	1. 5K	
R65, 66	ERDS2TJ102T	1/4W 1K	R551, 552	ERDS2TJ104T	1/4₩	100K		R705	ERDS2TJ182T	1/4W	1. 8K	
R67, 68	ERDS2TJ102T	1/4W 22K	R553, 554	ERDS2TJ563T	1/4W	56K		R706	ERDS2TJ222T	1/4W	2. 2K	
R69, 70	ERDS2TJ472T	1/4W 4.7K	R555, 556	ERDS2TJ104T	1/4W	100K		R707	ERDS2TJ332T	1/4W	3. 3K	
R71, 72	ERDS2TJ561T	1/4W 560	R557, 558	ERDS2TJ220T	1/4W	22		R708	ERDS2TJ472T	1/4W	4. 7K	
R201		1/10W 33K	R559, 560		<u> </u>			R709	ERDS2TJ682T	1/4W	6. 8K	
R202	ERJ6GEYJ333V ERJ6GEYJ683V		R561	ERDS2TJ152T ERDS2TJ102T	1/4W 1/4W	1. 5K		R710	ERDS2TJ123T	1/4W	12K	
R203-205	<del></del>							R711		1/4W	22K	
	ERJ6GEYJ1R5V		R562	ERDS2TJ471T	1/4W	470		R712	ERDS2TJ223T	-	820	
R206	ERJ8GEYJ222V	1/8W 2.2K	R563, 564	ERDS2TJ103T	1/4W	10K			ERDS2TJ821T	1/4W		*
R207	ERJ6GEYJ182V	1/10W 1.8K	R565	ERDS2TJ105T	1/4W	1M		R713	ERDS2TJ102T	1/4W	1 N	
R208	ERJ6GEYJ222V	1/10W 2. 2K	R569, 570	ERDS2TJ101T	1/4W	100	_	R714	ERDS2TJ122T	1/4W	1. 2K	
R209-211	ERJ6GEYJ4R7V		R571	ERDS2TJ152T	1/4W	1. 5K		R715	ERDS2TJ152T	1/4W	1. 5K	
R212, 213	ERJ6GEYJ152V		R572	ERDS2TJ102T	1/4W	1K		R716	ERDS2TJ182T	1/4W	1. 8K	
R214	ERJ6GEYJ822V		R573	ERDS2TJ560T	1/4W	56		R717	ERDS2TJ181T	1/4W	180	· -
R215	<del> </del>		R574	ERDS2TJ220T	1/4W	22		R718	ERDS2TJ331T	1/4W	330	
R216	ERJ8GEYJ222V	1/8W 2.2K	R575	ERDS2TJ681T	1/4W	680		R719, 720	ERDS2TJ180	1/4W	18	
R301	ERDS2TJ1ROT	1/4W 1.0	R576	ERDS2TJ681T	1/4W	680		R721, 722	ERDS2TJ330T	1/4W	33	
R302, 303	ERDS2TJ183T	1/4W 18K	R601	ERDS2TJ472T	1/4W	4. 7K	Δ	R723, 724	ERDS2TJ100T	1/4W	10	

Ref. No.	Part No.	Values & Reman	ks Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R725, 726	ERDS2TJ102T	1/4W 1K	R958	ERDS2TJ103T	1/4W 10K	C39, 40	ECQB1H152JZ3	50V 1500P
R727, 728	ERDS2TJ332T	1/4W 3.3K	R959	ERDS2TJ152T	1/4W 1.5K	C41, 42	ECBT1H470J5	50V 47P
R901	ERDS2TJ105T	1/4W 1M	R960	ERDS2TJ472T	1/4W 4.7K	C43, 44	ECEA1CK100B	16V 10U
R902	ERDS2TJ103T	1/4W 10K	R961	ERDS2TJ821T	1/4W 820	C45, 46	ECEA1EK4R7B	25V 4. 7U
R903	ERDS2TJ471T	1/4W 470	R962	ERDS2TJ183T	1/4W 18K	C47, 48	ECEA1HK010B	50V 1U
R904	ERDS2TJ103T	1/4W 10K	R963	ERDS2TJ473T	1/4W 47K	C49, 50	ECEA1CK100B	16V 10U
R905	ERDS2TJ182T	1/4W 1.8K	R964	ERDS2TJ392T	1/4W 3. 9K	C51, 52	ECKT1H103ZF	50V 0. 01U
R906	ERDS2TJ682T	1/4W 6.8K	R965	ERDS2TJ104T	1/4W 100K	C201	ECUV1E153MB	25V 0.015U
R907	ERDS2TJ103T	1/4W 10K	R970	ERDS2TJ222T	1/4W 2. 2K	C202	ECUV1E104KB	25V 0. 1U
R908	ERDS2TJ392T	1/4W 3.9K	R971	ERDS2TJ332T	1/4W 3. 3K	C203, 204	ECEV1CA100R	16V 10U
R909	ERDS2TJ272T	1/4W 2.7K	R971A	ERDS2TJ271T	1/4W 270	C205, 206	ECUV1E104KB	25V 0.1U
R910	ERDS2TJ103T	1/4W 10K	R972	ERDS2TJ472T	1/4W 4.7K	C209-211	ECEV1EN4R7R	25V 4. 7U
R911	ERDS2TJ392T	1/4W 3.9K	R972A	ERDS2TJ183T	1/4W 18K	C212-214	ECUV1H103ZFN	50V 0. 01U
R912	ERDS2TJ272T	1/4W 2.7K	R973	ERDS2TJ682T	1/4W 6.8K	C215	ECUV1H472KB	50V 4700P
R913	ERDS2TJ561T	1/4W 560	R973A	ERDS2TJ271T	1/4W 270	C216	ECUV1E562KBN	25V 5600P
R914	ERDS2TJ102T	1/4W 1K	R974	ERDS2TJ123T	1/4W 12K	C217-219	ECUV1E104KB	25V 0.1U
R915	ERDS2TJ103T	1/4W 10K	R974A	ERDS2TJ183T	1/4W 18K	C301	ECQP1153JZ	100V 0.015U
R916	ERDS2TJ332T	1/4W 3.3K	R975	ERDS2TJ223T	1/4W 22K	C302	ECEA1EK4R7B	25V 4. 7U
R917, 918	ERDS2TJ103T	1/4₩ 10K	R977	ERDS2TJ223T	1/4₩ 22K △	C303	ECKT1H392KB	50V 3900P
	ERDS2TJ223T	1/4W 22K	R978	ERDS2TJ473T	1/4W 47K	C304, 305	ECKT1H222KB	50V 2200P
R922	ERDS2TJ472T	1/4W 4.7K	R979	ERDS2TJ272T	1/4W 2.7K	C306	ECKT1H682KB	50V 6800P
R923	ERDS2TJ152T	1/4W 1.5K	R980	ERDS2TJ472T	1/4W 4.7K	C310	ECKD1H472KB	50V 4700P
R924	ERDS2TJ223T	1/4₩ 22K ⚠	R981	ERDS2TJ392T	1/4W 3. 9K	C311	ECEA1AU101B	10V 100U
R925	ERDS2TJ821T	1/4W 820	R982	ERDS2TJ223T	1/4W 22K	C312	ECKT1H103ZF	50V 0. 01U
R926	ERDS2TJ223T	1/4₩ 22K Δ	R983	ERDS2TJ103T	1/4W 10K	C313, 314	ECKT1H223ZF	50V 0. 022U
R927	ERDS2TJ821T	1/4W 820	R984	ERDS2TJ472T	1/4W 4.7K (EB)	C315, 316	ECBT1H821KB5	50V 820P
R928	ERG1SJ150	1₩ 15 Δ	R985	ERDS2TJ222T	1/4W 2. 2K (EB)	C317, 318	ECBT1H121KB5	50V 120P
R929	ERG1SJ180E	1₩ 18 <u>^</u>	R986	ERDS2TJ332T	1/4W 3. 3K (EB)	C319, 320	ECQV1H563JZ3	50V 0.056U
R930	ERDS2TJ223T	1/4₩ 22K ⚠	R987	ERDS2TJ822T	1/4W 8. 2K	C321, 322	ECQB1H223JZ3	50V 0. 022U
R931	ERDS2TJ821T	1/4₩ 820	R988	ERDS2TJ473T	1/4W 47K	C323, 324	ECQB1H103JZ3	50V 0.01U
R932	ERDS2TJ472T	1/4W 4.7K (EB)	R989	ERDS2TJ822T	1/4W 8. 2K	C325, 326	ECKT1H122KB	50V 1200P
R932	ERDS2TJ103T	1/4W 10K (E, I	E5, EG) R990	ERDS2TJ473T	1/4W 47K	C328	ECBT1H180J5	50V 18P
R933	ERDS2TJ472T	1/4₩ 4.7K				C329	ECEA1EK100B	25V 10U
R935	ERDS2TJ682T	1/4W 6.8K	.		CAPACITORS	C330	ECKT1H103ZF	50V 0.01U △
R936	ERDS2TJ223T	1/4W 22K				C331	ECBT1H180J5	50V 18P
R938	ERDS2TJ682T	1/4W 6.8K	C1, 2	ECEA1EK4R7B	25V 4.7U	C401, 402	ECBT1H820KB5	50V 82P
R939	ERDS2TJ223T	1/4W 22K	C3, 4	ECBT1H681KB5	50V 680P	C403, 404	ECEA1EK4R7B	25V 4. 7U
R940, 941	ERDS2TJ562T	1/4W 5.6K	C5, 6	ECBT1H102KB5	50V 1000P	C405, 406	ECKT1H122KB	50V 1200P
R942	ERDS2TJ821T	1/4W 820	C7, 8	ECBT1H561KB5	50V 560P	C407, 408	ECKT1H152KB	50V 1500P
R943	ERDS2TJ223T	1/4W 22K	C9, 10	ECEAOJU101B	6. 3V 100U	C409, 410	ECQB1H472JZ3	50V 4700P
	ERDS1FVJ180T	1/2W 18 A	C11, 12	ECQB1H562JZ3	50V 5600P	C411, 412	ECEA1CK100B	16V 10U
R946	ERDS2TJ102T	1/4W 1K	C13, 14	ECEA1EK4R7B	25V 4. 7U	C413, 414	ECQV1H473JZ3	50V 0.047U
	ERDS2TJ103T	1/4W 10K	C15, 16	ECBT1H101KB5	50V 100P	C415, 416	ECQV1H224JZ3	50V 0. 22U
	ERDS2TJ472T	1/4W 4.7K	C17, 18	ECQB1H822JZ3	50V 8200P	C417-420	ECEA1HKR68B	50V 0. 68U
	ERDS2TJ821T	1/4W 820	C19, 20	ECEA1HKR47B	50V 0. 47U	C421, 422	ECQV1H224JZ3	50V 0. 22U
	ERDS2TJ101T	1/4W 100	C21, 22	ECEA1CK100B	16V 10U	C423, 424	ECQV1H473JZ3	50V 0.047U
R952	ERDS2TJ823T	1/4W 82K	C23, 24	ECQV1H273JZ	50V 0. 027U	C425, 426	ECEA1CK100B	16V 10U
	ERDS2TJ393T	1/4W 39K	C27, 28	ECQB1H822JZ3	50V 8200P	C427, 428	ECQB1H472JZ3	50V 4700P
	ERDS2TJ472T	1/4W 4.7K	C29, 30	ECQV1H563JZ3	50V 0. 056U	C429, 430	ECQB1H103JZ3	50V 0. 01U
	ERDS2TJ102T	1/4W 1K	C33, 34	ECBT1H101KB5	50V 100P	C431, 432	ECKT1H102KB	50V 0.001U
	ERDS2TJ473T	1/4W 47K	C35, 36	ECEA1HKO10B	50V 1U	C551, 552	ECQV1H104JZ3	50V 0.1U
	ERDS2TJ153T	1/4W 15K	C37, 38	ECQP1121JZ	100V 120P	C553, 554	ECEAOJKS101B	6. 3V 100U

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C555	ECKT1H103ZF	50V 0. 01U	C619, 620	ECKT1H103ZF	50V 0.01U △
C556	ECEA1CK100B	16V 10U	C621	ECKT2H682PEL	500V 6800P △
C557	ECEA1EK4R7B	25V 4. 7U	C701	ECKT1H223ZF	50V 0. 022U
C558	ECEA1HKO10B	50V 1U	C702, 703	ECKT1H103ZF	50V 0. 01U
C559-561	ECBT1C103NS5	16V 0. 01U	C901	ECEAOJU222B	6. 3V 2200U
C563, 564	ECEAOJK101B	6. 3V 100U	C902	ECKT1H103ZF	50V 0.01U
C567	ECEA1VK100B	35V 10U	C903	ECEA1HKD10B	50V 1U
C568	ECEA1VK100B	35V 10U	C904	ECEA1EK4R7B	25V 4. 7U
C601	ECKT2H682PEL	500V 6800P	C905	ECKT1H103ZF	50V 0.01U
C602, 603	ECEA1EU222E	25V 2200U ⚠	C906	ECEA1CN100SB	16V 10U
C604, 605	ECKT1H103ZF	50V 0. 01U	C907	ECEA1HKO10B	50V 1U
C606, 607	ECEA1AU221B	10V 220U	C908	ECKT1H103ZF	50V 0. 01U
C608, 609	ECKT1H103ZF	50V 0. 01U	C909	ECQB1H822JZ3	50V 8200P
C610, 611	ECEA1AU102B	10V 1000U	C910	ECEA1CK100B	16V 10U
C612	ECEA1EU222E	25V 2200U ⚠	C911	ECBT1H470J5	50V 47P
C613	ECKT1H103ZF	50V 0. 01U	C912	ECEA1HKD10B	50V 1U
C615	ECEA1EK100B	25V 10U	C913	ECKT1H103ZF	50V 0. 01U
C617	ECEA1HU470B	50V 47U	C914	ECEA1EK4R7B	25V 4. 7U
C618	ECKT1H103ZF	50V 0. 01U	C915	ECEAOJU101B	6. 3V 100U
C619, 620	ECKT1H103ZF	50V 0. 01U ⚠	C916	ECKT1H103ZF	50V 0. 01U
C621	ECKT2H682PEL	500V 6800P ⚠	C917	ECEA1HKO10B	50V 1U (EB)
C701	ECKT1H223ZF	50V 0. 022U	C918	ECKT1H103ZF	50V 0. 01U



# Service Manual

Supplement

Dolby NR-Equipped Stereo Cassette Deck RS-B655

## Color

(K)...Black Type

# DOLBY B.C NR HX PRO

\*HX Pro headroom extension originated by Bang Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", the double-D symbol, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

## Area

Country Code	Area	Color
(E, E5)	Continental Europe.	
(EB)	Great Britain.	(K)
(EG)	F.R. Germany & Italy.	

Please file and use this supplement manual together with the service manual for Model No. RS-B655, Order No. AD8907232C2.

#### Note:

• This supplement has been issued to correct an error in the "Replacement Parts List" on page 36.

# **DELETION**

# ■ REPLACEMENT PARTS LIST (Page 36 of service manual.)

#### Note:

Please remove the MECHANISM UNIT ASS'Y and the PRINTED CIRCUIT BOARD ASS'Y from the
parts list because they are out of object in the replacement parts lists.

D.f.N.	Change of Part No.	Dant Nama & Dassuintian	Remarks
Ref. No.	ORIGINAL	Part Name & Description	nemarks
MECHANISM UNI	Т		
MECH1	RAA0802	MECHANISM ASS'Y	Deletion
PRINTED CIRCUI	T BOARDS		
PWB1 (E, E5, EG)	REP0306A	MAIN P.C.B. ASS'Y	Deletion
PWB1 (EB)	REP0306B	MAIN P.C.B. ASS'Y	Deletion
PWB2	REP0307A	SUB P.C.B. ASS'Y	Deletion

# Service Manu

Dolby NR-Equipped Stereo Cassette Deck

Cassette Deck RS-B665

# DOLBY B.C NR HX PRO

\* HX Pro headroom extension originated by Bang Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", the double-D symbol, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

**RS-B555 MECHANISM SERIES (AR350)** 

## Color

(K)...Black Type

#### Area

Country Code	Area	Color
(E)	Continental Europe.	
(EB)	Great Britain.	(K)
(EG)	F.R. Germany and Italy	

Please file and use this supplement manual together with the service manual for Model No. RS-B655, Order No. AD8907232C2.

# CHANGE

# I CHANGE IN REPLACEMENT PARTS LIST

- Note: 1. Mentioned in this parts list are only those different from Model No. RS-B655 (E, EB, EG) all other parts are the same as for RS-B655 (E, EB, EG).
  - 2. Important safety notice:
    - Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
  - 3. Parenthesized indications in "remarks" columns specify the area.
    - Parts without these indications can be used for all areas.

Ref. No.	Change of	of Part No.	Part Nama & Description	Bomorles
nei. No.	RS-B655 -	RS-B665	Part Name & Description	Remarks
RESISTORS				
R933	ERDS2TJ472T	ERDS2TJ332T	C. RESISTOR, 1/4W, 3.3KS	2
R944, R945	ERDS1FVJ180T	ERDS1FVJ120T	C. RESISTOR, 1/2W, 125	2 🛆
R959	ERDS2TJ152T	ERDS2TJ332T	C. RESISTOR, 1/4W, 3.3KS	2
R985	ERDS2TJ222T	ERDS2TJ332T	C. RESISTOR, 1/4W, 3.3Ks	(EB)
R986	ERDS2TJ332T	ERDS2TJ222T	C. RESISTOR, 1/4W, 2.2KS	(EB)
CAPACITORS				
C1, C2	ECEA1EK4R7B	ECA1HPX\$4R7B	E. CAPACITOR, 50V, 4.7μF	
C9, C10	ECEA0JU101B	ECA0JPX\$101B	E. CAPACITOR, 6.3V, 100µF	
C13, C14	ECEA1EK4R7B	ECA1HPX\$4R7B	E. CAPACITOR, 50V, 4.7μF	
C19, C20	ECEA1HKR47B	ECA1HPX\$R47B	E. CAPACITOR, 50V, 0.47µF	
C21, C22	ECEA1CK100B	ECA1CPX\$100B	E. CAPACITOR, 16V, 10µF	
C35, C36	ECEA1HK010B	ECA1HPX\$4R7B	E. CAPACITOR, 50V, 4.7µF	

Ref. No.	Change of Parts No.		Part Name & Description	Remarks
	RS-B655 =	RS-B665	Later and Constitution	Tiomarks
CAPACITORS				
C43, C44	ECEA1CK100B	ECA1CPXS100B	E. CAPACITOR, 16V, 10μF	
C45, C46	ECEA1EK4R7B	ECA1HPX\$4R7B	E. CAPACITOR, 50V, 4.7μF	
C47, C48	ECEA1HK010B	ECA1HPXS010B	E. CAPACITOR, 50V, 1μF	
C49, C50	ECEA1CK100B	ECA1CPX\$100B	E. CAPACITOR, 16V, 10μF	
C403, C404	ECEA1EK4R7B	ECA1HPX\$4R7B	E. CAPACITOR, 50V, 4.7μF	
C411, C412	ECEA1CK100B	ECA1CPX\$100B	E. CAPACITOR, 16V, 10µF	
C425, C426	ECEA1CK100B	ECA1CPX\$100B	E. CAPACITOR, 16V, 10μF	
C602, C603	ECEA1EU222E	ECA1EPT222E	E.CAPACITOR, 25V, 2200µF	Δ
C610, C611	ECEA1AU102B	ECA1AAX102B	E. CAPACITOR, 10V, 1000μF	
TRANSISTOR	S			
Q303	2SB621ARSTA	2SB1357EFTA	TRANSISTOR	Δ
CONNECTOR	S			
D609	MA4220M	MA4220M	DIODE	(E, EG)
		MA4200M	DIODE	(EB)
CONNECTOR	S			
CN6A		RJS1A1704	CONNECTOR (4P)	
CN6B	RJS1A1073	RJ\$1A1705	CONNECTOR (5P)	
CN6C			CONNECTOR (3P)	Deletion
JACKS				
JK2	SJJ146B	SJJD19	JACK, HEADPHONES	
JK3, JK4	RJJ65MS01	RJJ65MA01	JACK, MIC	
CABINET ANI	CHASSIS			
8	RGR0024-A	RGR0024-S	REAR PANEL	· (E)
8	RGR0024-E	RGR0024-T	REAR PANEL	(EB)
8	RGR0024-L	RGR0024-U	REAR PANEL	(EG)
18	RMK0026-1	RMK0026-2	CHASSIS	
20	RFKGSB655E-K	RFKGSB665E-K	FRONT PANEL ASS'Y	
26	RGU0133	RGU133A	BUTTON, OPERATION	
42	RKU0009	RKU0009-1	BUTTOM BOARD	
43	XTB3+10G	XTB3+10GFZ	SCREW	
MECHANISM	PARTS LIST			
109	REX0075	REX0075-2	LEAD WIRE BLOCK	
PACKING MA	TERIAL			
P1	RPG0255	RPG0524	CARTON BOX	
P2	RPN0178		PAD, FRONT/BACK	Deletion
P3	SPS5185	SPSD152	PAD, ACCESSORIES	
P5		RPN0366A	PAD (A)	Addition
P6	601/4	RPN0366B	PAD (B)	Addition
P7		RPN0366C	PAD (C)	Addition
P8		RPN0366D	PAD (D)	Addition
ACCESSORIE	3			
A1	RQF0239	RFKSSB665E-K	INSTRUCTION MANUAL	(E)
A1	RQF0240	RQT0548-B	INSTRUCTION MANUAL	(EB)
A1	RQF0241	RQT0549-D	INSTRUCTION MANUAL	(EG)
A4		RQA0013	WARRANTY CARD	Addition
A5		RQCB0169	SERVICENTER LIST	Addition